Genotype-Phenotype Study of the Middle Gangetic Plain in India Shows Association of rs2470102 with Skin Pigmentation

Genotype-phenotype study of Middle Gangetic Plain in India reveals association of rs2470102 with skin pigmentation

Anshuman Mishra[1*], Sheikh Nizammuddin[1], Chandana Basu Mallick[2,3*], Sakshi Singh[1], Satya Prakash[1], Niyamat Ali Siddiqui[4], Niraj Rai[1], S. Justin Carlus[1], D.V.S. Sudhakar[1], Vishnu P Tripathi[5], Märt Möls[3,6], Xana Kim-Howard[7], Hemlata Dewangan[8], Abhishek Mishra[9], Alla G. Reddy[1], Biswajit Roy[1], Krishna Pandey[4], Gyaneshwer Chaubey[3], Pradeep Das[4], Swapan K. Nath[7], Lalji Singh[1*], Kumarasamy Thangaraj[1#]

[1]*CSIR-Centre for Cellular and Molecular Biology, Hyderabad, India*
[2]*Department of Evolutionary Biology, Institute of Molecular and Cell Biology, University of Tartu, Tartu, Estonia*
[3]*Estonian Biocentre, Tartu, Estonia*
[4]*Rajendra Memorial Research Institute of Medical Sciences (ICMR), Patna, India*
[5]*Department of Biotechnology, V.B.S. Purvanchal University, Jaunpur, India*
[6]*Insitute of Mathematical Statistics, University of Tartu, Tartu, Estonia*
[7]*Arthritis and Clinical Immunology Research Program, Oklahoma Medical Research Foundation, Oklahoma, USA*
[8]*Department of Anthropology, Delhi University, New Delhi, India*
[9]*Oriental Institute of Science and Technology, Bhopal, India*
**Current affiliation: Pusan National University, Busan, Korea (AM); The Roslin Institute, University of Edinburgh, UK (CBM); Genome Foundation, Nacharam, Hyderabad, India (LS)*

Correspondence:

K. Thangaraj
CSIR-Centre for Cellular and Molecular Biology
Uppal Road
Hyderabad 500 007
India
Ph: +91-40-27192828
Fax: +91-40-27160591
E-mail: thangs@ccmb.res.in

Short title: Skin color genetics of Middle Gangetic Plain

Abbreviations: MGP, Middle Gangetic Plain; MI, melanin index; miRNA, microRNA; SNP, single nucleotide polymorphism; LD, linkage disequilibrium.

ABSTRACT

Our understanding of genetics of skin pigmentation has been largely skewed towards populations of European ancestry imparting much less attention to South Asian populations, who behold huge pigmentation diversity. Here, we investigate the skin pigmentation variation in a cohort of 1167 individuals in Middle Gangetic Plain of Indian subcontinent. Our data confirms the association of rs1426654 with skin pigmentation among South Asians, consistent with previous studies and also reveals association for rs2470102 SNP. Our haplotype analyses further help us to delineate the haplotype distribution across the social categories and skin color. Taken together, our findings suggest that the social structure defined by the caste system in India has a profound influence on the skin pigmentation patterns of the subcontinent. In particular, social category and associated SNPs explain about 32% and 6.4%, respectively, of the total phenotypic variance. Phylogeography of the associated SNPs studied across 52 diverse populations of the Indian subcontinent, reveals wide presence of the derived alleles, albeit their frequencies vary across populations. Our results show that both of the polymorphisms (rs1426654 and rs2470102) play an important role in skin pigmentation diversity of South Asians.

INTRODUCTION

Human skin color varies remarkably within and between populations. This variation has been mainly attributed to the differences in the amount, type and distribution of melanin in melanocytes and the ratio of eumelanin to phaeomelanin (Thody et al. 1991; Rees 2003). Human skin color variation is a polygenic trait and has been characterized by a number of major genes, modifier genes and environmental influences (Miller et al., 2007; Sturm and Duffy 2013). It has been suggested that skin pigmentation is largely shaped by different levels of ultraviolet radiation

(UVR) *via* natural selection (Jablonski and Chaplin 2000, 2010; Chaplin, 2004). Furthermore, there has been evidence of population-specific signatures of positive selection for different pigmentation genes (Izagirre et al., 2006; Voight et al., 2006; Lao et al., 2007), reviewed in (Anno et al., 2010).

SLC24A5 (solute carrier family 24 member 5) stands out in the list of 170 pigmentation genes, demonstrating a major influence on pigmentation variation. The key SNP (rs1426654) in the third exon explains 25-38% of the pigmentation differences between Europeans and West Africans (Lamason et al., 2005). Functional assessment of the SNP suggests that it is involved in reduced melanogenesis, thereby making the skin lighter (Cook et al., 2008; Ginger et al., 2008; Sturm, 2009; Tsetskhladze et al., 2012).

India possesses a wide variation in skin color ranging from fair, wheatish, brown to dark brown skin tones (Jaswal, 1983; Hourblin et al., 2014). Nevertheless, only a handful of studies featuring the skin pigmentation variation (Stokowski et al., 2007; Mallick et al., 2013; Jonnalagadda et al., 2016) have been reported till date. The Indo-Gangetic Plain is one of the most densely populated regions in the world accounting for 40% of the Indian population. It has been further divided into- Upper, Middle and Lower Gangetic Plain. The Middle Gangetic Plain (MGP) extends over a stretch of approximately 600 km in the east-west and 330 km in the north-south direction covering the states of Uttar Pradesh and Bihar, comprising the fertile banks of Ganges and its tributaries (Ghaghra, Gandak and Kosi) (Figure 1). MGP is a home to more than 100 million people following the complex, yet stratified and well-defined caste system (Schwartzberg et al., 1968; Chaubey et al., 2007). The caste system, unique to South Asia, is characterized by multi-layered endogamy (Supplementary Text online). Hence, this entity of socio-culturally diverse region including various ethnic groups and castes provides us an excellent model to study local

skin pigmentation variation of the region and in particular, investigate how the social hierarchy influences skin pigmentation variation.

Our main objectives of the study were first, to characterize the skin pigmentation diversity of the region (Cohort 1); second, to evaluate the association of the *SLC24A5* variants with skin pigmentation (Cohort 2) and third, to assess the frequency distribution of *SLC24A5* SNPs across the Indian subcontinent (Cohort 3). The details of the three cohorts, that are included in the study, have been specified in Methods (Supplementary Table S1-S3 online).

RESULTS

Pigmentation Diversity

Analysis of Cohort 1 (n=1167) of MGP shows wide variation in skin color with melanin indices (MI) ranging from 23−90.4 (Supplementary Figure S1 online) and average melanin index of 59.38 ± 10.78. Among the 27 ethnic groups assessed, highest average MI was observed among Manjhis (70.83 ± 8.13); while, the lowest average MI was among Brahmins of Uttar Pradesh (45.13 ± 5.91) (Supplementary Table S4 online). The maximum variation in melanin index was seen among Bhagats (66.75 ± 10.26). However, there was no significant difference in average MI for males and females (Males=59.0, Females=60.1; p=0.1036) included in Cohort 1. One-way ANOVA analysis suggests that skin color varies significantly among ethnic groups ($p < 2.2 \times 10^{-16}$) and social categories ($p < 2.2 \times 10^{-16}$). This effect of ethnic group on skin color is in accordance with previous studies including six endogamous groups of Eastern Nepal (Williams-Blangero and Blangero 1991) and West Maharashtra (Jonnalagadda et al. 2015). Interestingly, the comparison of skin color measurements among the four social categories (GENERAL, SC-Scheduled Caste, OBC - Other Backward Classes and RG - Religious Group) assessed in the present study, indicate that GENERAL category (comprising of the upper and middle castes in

the caste system) shows the lowest average MI (Supplementary Figure S2 online, Supplementary Text online).

Resequencing *SLC24A5*

The human *SLC24A5* gene includes 9 exons spanning over 21.7 kb. We sequenced all the exons (4.4 kb) and the adjoining flanking regions. Of the 3525 bp resequenced among 374 individuals (Cohort 2), 10 variants were identified (Supplementary Table S5 online). The variants included two common polymorphisms (MAF>5%), which were subsequently tested for association with skin pigmentation. One of them rs1426654, is a non-synonymous SNP in the third exon while rs2470102 is located in intron 8 of *SLC24A5* and 3'UTR of the *MYEF2*. Of these, the evidence for association of rs1426654 SNP with skin color has been well reported (Lamason et al., 2005; Stokowski et al., 2007; Ang et al., 2012; Beleza et al., 2013; Mallick et al., 2013), with the derived A allele making the skin lighter. However, role of rs2470102 in skin pigmentation has not been elucidated till date. The remaining eight variants were observed only in heterozygous state. Graphical representation of the SNPs in relation to exon-intron structure of the gene and the region resequenced has been shown in Figure 2. The electropherograms for rs1426654 and rs2470102 have been provided in Supplementary Figure S3 online.

Genotype-Phenotype association

The beeswarm plot illustrates the distribution of MI for rs1426654 and rs2470102 genotypes (Figure 3A and 3B). We find that the mean MI for individuals with AA genotypes is lower than those with AG and GG genotypes (Figure 3A and 3B) for both of the SNPs. However, to further our understanding, we used linear model (general genotype model) to assess the effect of genotype on skin pigmentation tested individually for each of the two SNPs (Table 1-Model 1 and Model 2). After controlling for sex and population, we find both the SNPs rs1426654 and

rs2470102, to be significantly associated with skin color ($p=4.493x10^{-7}$ and $p=5.79x10^{-7}$, respectively). These p values remained significant even after using the conservative Bonferroni corrections for multiple testing (the corrected p values being $8.9x10^{-7}$ and $1.158x10^{-6}$, respectively). rs1426654 and rs2470102 SNPs lie 7010 bp apart and were found to be in high linkage disequilibrium (LD) (D'=1, r^2=0.87) when examined using Gujarati Indians (GIH) included in HapMap. A relevant question to ask then was, if the observed association signal for rs2470102 is entirely due to known causative SNP rs1426654. For this, we used another linear model (Model 3), which was adjusted for rs1426654. We found that the effect of rs2470102 was still statistically significant (p=0.03), thereby suggesting that rs2470102 has its independent effect on skin pigmentation variation among Indian populations. The details of the results for the full model and their summary are given in Supplementary Table S6 online.

In line with the evidence of the association of SNP rs2470102 with skin pigmentation observed, the effect of rs2470102 was further assessed by comparing the difference in the estimated means of skin measurements for individuals with the genotypes (AA, AG and GG). It appeared that presence of two copies of derived allele (AA) of rs2470102 made an individual on an average 7.10 melanin units lighter as compared to GG homozygotes (p=0.0011, Supplementary Table S7). After adjusting for rs1426654 (Model 3), individuals with AA genotypes were still on an average 4.52 units lighter than those with GG genotypes (p=0.03, Supplementary Table S7). Hence, taken together, we conclude that rs2470102 has an independent effect on skin pigmentation variation.

rs2470102 has been earlier reported to be a mirSNP (Richardson et al., 2011). To address this, we examined five web-based algorithms to identify the possible miRNAs targeting the SNP (Supplementary text online; Supplementary Table S8 online). Our *in-silico* analyses are

suggestive of mir-1180 interacting with rs2470102, however it requires further confirmation using functional or gene reporter assays to have a complete understanding of the role of the SNP.

Haplotype analysis

We performed haplotype analyses to determine the relationship of haplotypes with skin color and social categories. We identified nine haplotypes (H1-H9) in the resequenced region. A median-joining network was constructed to study the relationship of the haplotypes (Figure 4). Most of the chromosomes of the present study (97.6%) contribute to three major haplotypes (H1-H3) that differ in two polymorphisms (rs1426654 and rs2470102), whilst others (2.4%) belong to the remaining haplotypes (H4-H9). Earlier studies have revealed that rs2470102 is phylogenetically ancestral to rs1426654 (Canfield et al., 2013).

Haplotype vs skin color

On comparison of the frequencies of haplotypes across the skin color distribution, we find that the light skinned individuals have higher frequency of H1 haplotype. Additionally, we observe a clear trend of gradual decrease in frequency of H1 haplotypes with increase in melanin indices (Supplementary Figure S4 online). Noticeably, the frequency of H1 haplotypes for MI (30−40) is 96% and it declines to 37% for individuals with MI (70−80) (Supplementary Figure S4 online).

Haplotype vs social category

On comparison of the haplotypes across the four social categories studied (Figure 4), we note the presence of all the four social categories in three major haplotypes (H1-H3), hence not confining to the idea of a social category being exclusive to any particular haplotype. A chi-square test further advocates that the distribution of the haplotypes is significantly different across the social

categories for H1 ($p=3.5X10^{-10}$) and H3 ($p=1.449X10^{-7}$) but not for H2 (p=0.3475) (Figure 4). This further attests the effect of social categories on skin pigmentation, as predominance of individuals from GENERAL category (including mostly the upper and middle castes in the caste system) in haplotype H1 is observed, which is correlated with lighter skin color (Figure 4).

Phylogeography of rs1426654 and rs2470102

Since our association analyses ascertained both rs1426654 and rs2470102 SNPs as important determinants of skin pigmentation variation among Indian populations, we were interested to study the phylogeography of the SNPs. For this, we genotyped 1825 individuals belonging to 52 diverse populations, representing the Indian subcontinent (Supplementary Table S3 online). The frequencies across the populations have been shown in Figure 5.

The allele frequencies of the SNPs suggest that both the polymorphisms are widely spread and highly polymorphic across the subcontinent (Supplementary Table S3 online & Figure 5). Both the SNPs exhibit similar allele frequencies among Indian populations (when grouped by language or social status) as well as among other world populations (Supplementary Table S9 online). This can be further explained by the fact that these SNPs are in high LD in most of the populations studied (D'=0.64–1), except for Warli (D'=0.53) and Adi-Dravida (D'=0.23). The derived allele (A) frequencies ranged from 0.04–1.0 and 0.13–0.98 for rs1426654 and rs2470102, respectively (Supplementary Table S3). The range of allele frequencies observed in the present study (0.0–1.0) for rs1426654 is concordant to those observed in our previous study (0.03–1.0) (Mallick et al., 2013). When populations were grouped by social status, caste populations showed higher A allele frequencies compared to tribes (0.72 vs 0.39 for rs1426654 and 0.76 vs 0.45 in rs2470102). This finding is consistent with another study where they found the caste populations being significantly lighter than tribals at a localized level, among populations of West Maharashtra

(Jonnalagadda et al. 2015) based on their skin color measurements. A study focusing on 11 endogamous Indian populations also found higher rs1426654-A allele frequencies among caste than tribes (Mukherjee et al., 2013). However, some tribes show exceptionally high frequency of rs1426654-A allele for example Gujjar (Jammu and Kashmir -1) and Meena (Rajasthan -0.91) (Supplementary Table S3 online). These tribes have been also known to be fair skinned (Joshua project, https://joshuaproject.net/). Interestingly, Brahmins belonging to higher castes in the social hierarchy of the caste system (Supplementary text online), irrespective of their geographical locations (North- Kashmiri Pandits, Pandits of Haryana, Brahmins of Uttar Pradesh), Havik (Karnataka, South) show similar frequencies of rs1426654-A variant (0.83–1) (Supplementary Table S3 online). When populations were grouped by their linguistic affiliations, the frequency of the rs1426654 and rs2470102 derived alleles (A) were found to be very low among Austroasiatic and Tibeto-Burman speakers (Supplementary Table S9 online).

DISCUSSION

The present study undertaken in the Middle Gangetic plain helps us to understand micro-differentiation patterns in skin pigmentation measures of the region. The apparent phenotypic variation (MI- 23–90.4) observed in this small geographical region covering an area of 144,409 sq km can be mainly attributed to the socio-cultural boundaries, superimposed with high level of endogamy (Karve, 1968; Bhasin and Walter 2001; Chaubey et al., 2007). Our data demonstrates that skin color varies significantly across different social categories (Supplementary Figure S2 online) and ethnic groups (Supplementary Table S4 online). Based on skin color measurements, we find that the mean melanin indices of individuals of GENERAL category are significantly different compared to other castes ($p=0.00019$). On the other hand, difference in skin measurements of individuals under OBC and SC is not significant ($p=0.43$). A similar picture

was also evident in the haplotype analyses. The number of individuals having both the chromosomes in H1 haplotype was significantly higher in GENERAL category (64%) than other social groups (27%) ($p=1x10^{-10}$) (Figure 4). Taken together, our findings provide evidence for the primacy of socio-cultural factors on skin pigmentation patterns observed in the subcontinent. This is also concordant with the previous studies, which suggest that UVR-based selection model alone cannot explain the entire skin pigmentation variation in Indian populations, but is rather an interplay between selection and demographic history of the populations (Mallick et al. 2013; Mukherjee et al., 2013).

Our association tests suggest both rs1426654 and rs2470102 have independent effect on skin color, of which rs1426654 was shown to be convincingly replicated earlier in other Indian populations (Stokowski et al., 2007; Mallick et al., 2013; Jonnalagadda et al., 2016) as well as world populations (Lamason et al., 2005; Ang et al., 2012; Beleza et al., 2013; Adhikari et al., 2016). rs2470102 has been earlier found to be associated with brown eye color in African-European admixed population of Cape Verde (Beleza et al., 2013) and associated with melanoma in a versatile gene based test called VEGAS (Liu et al., 2010), but not with skin pigmentation. Therefore, our association and haplotype analyses taken together, allow us to infer that rs1426654 and rs2470102 as a "two SNP model" can better explain the variation in skin color among Indian populations than each SNP individually. Precisely, we found that the social category and associated SNPs explain 32% and 6.4%, respectively, accounting for a total of 38.4% of the variability in skin pigmentation. Of the 32% of phenotypic variance explained by the social category, 37.4% is due to variation in pigmentation among the social categories (akin 11.97% of the total variability) (Supplementary Figure S5 online). On comparison we found, rs1426654

(5.37%) has a slightly larger effect than rs2470102 (4.99%) and both the SNPs taken together (6.41%) can explain better the variation in skin pigmentation than each of the SNPs individually.

In summary, the present study involving the populations of Middle Gangetic Plain refines our existing knowledge of skin pigmentation genetics in South Asia. We report the association of rs2470102 SNP with skin pigmentation and spatial distribution of the SNP marks its ubiquitous presence over the Indian subcontinent. Our haplotype analyses reveal presence of three major haplotypes (H1-H3), of which frequency of haplotype H1 is higher in individuals with lower melanin indices. Our data provides evidence of social categories being instrumental in shaping the skin pigmentation variation of the subcontinent. This aspect observed in the present study among Indian populations, helps us to understand the possible paradigms contributing to global spectrum of skin color.

MATERIALS AND METHODS

Study Area

This study was conducted in the MGP across North Bihar and eastern part of Uttar Pradesh (Figure 1). These samples were collected through multiple field visits at various districts of MGP during October 2010 – October 2011.

Study subjects and Cohorts

Our present study comprises of three cohorts. Cohort 1 consists of 1167 unrelated subjects (27 ethnic groups; 759 males and 408 females), which were used for studying the phenotypic variation of the MGP (Supplementary Table S1). Out of these, a subset of individuals was included in Cohort 2 (448; 25 ethnic groups), which was recruited for phenotype-genotype study (Supplementary Table S2). About 2–4 ml blood sample was taken from the individuals. Cohort 3

comprised of 1825 individuals including 52 populations (24 caste and 27 tribe populations) across India (Supplementary Table S3). This cohort was used for studying the phylogeography of the associated SNPs observed in the study. These samples are part of DNA bank of CSIR-Centre for Cellular and Molecular Biology (CCMB, Hyderabad). The Institutional Ethical Committee (IEC) of CCMB, Hyderabad had approved the study and prior permission was also obtained from local authorities. Informed written consent was obtained from each subject.

Phenotype data collection

The skin reflectance readings were measured using Dermaspectrometer (Cortex Technology, Hadsund, Denmark). Measurement was performed in duplicates at the inner upper arm and forehead. However, only the readings from the former were used for genetic analyses. The quantitative assessment of melanin content, as obtained with the Dermaspectrometer is expressed as melanin index (MI). Subjects were excluded if they reported the use of skin ointments on the measurement areas. Also, individuals reported to have any pigmentation disorders or skin diseases were excluded. Skin measurements were taken for Cohorts 1 and 2.

Sequencing

Genomic DNA was extracted from whole blood using standard methods (Thangaraj et al. 2002). Primers for all the nine exons of *SLC24A5* were designed using NCBI Primer-BLAST (http://www.ncbi.nlm.nih.gov/tools/primer-blast), MacVector (MacVector, Inc. USA) and the Amplify 3X Software (http://engels.genetics.wisc.edu/amplify) (Supplementary Table S10). All the nine exons and its flanking regions were amplified through PCR using these primer pairs and emerald PCR master mix (Takara) among individuals of cohort 2. PCR amplification was performed using the following conditions: initial denaturation at 95º C for 5 min, followed by 35 cycles of 95º C for 30s, 62º C for 25s and 72º C for 3 mins and final extension at 72º C for 3

mins. PCR product was cleaned using Exo-SAP (Exonuclease-Shrimp Alkaline Phosphatase) (USB Corporation, USA), according to manufacturers' protocol. Exo-SAP treated amplicons were sequenced directly using BigDye terminator cycle sequencing kit v.3.1 (Applied Biosystems, USA) on ABI 3730xl DNA analyser. Sequences were assembled with the reference sequence and analyzed using AutoAssembler software (Applied Biosystems, USA). Observed variants were validated and confirmed by visual confirmation of electropherograms. The genotype frequencies were in Hardy-Weinberg equilibrium ($p>0.05$) among the variants studied.

Statistical analysis

The difference in average melanin index of males and females was calculated by Welch two sample t-test. One-way ANOVA analysis was used to evaluate if the skin pigmentation varied across ethnic groups and social categories. The associations between polymorphisms of *SLC24A5* and skin pigmentation measures were analyzed using three linear models (Models 1-3) in R using F test (Table 1). The summary and the full description of the models is given in Supplementary Table S6. For multiple comparisons, we used post-hoc Tukey's like comparison tests, available in the multicomp package in R. All the statistical analyses were done using R version 3.1.2 (R Development Core Team, 2011). For all statistical tests, significance was defined as $p<0.05$ unless specified. Sequence data (3525 bp) was phased using PHASE implemented in DNAsP and haplotypes were inferred. A haplotype network was drawn using the median-joining algorithm by NETWORK software (fluxus-engineering.com) to study the relationship between the haplotypes. Linkage disequilibrium (LD) block structure was examined using Haploview software (v4.2) using default parameters. For calculating LD estimates for populations in Cohort 3, only those populations that had at least 10 individuals were included. Pairwise LD between polymorphisms is expressed as D' (a normalized measure for assessing LD).

CONFLICT OF INTEREST

The authors state no conflict of interest.

ACKNOWLEDGEMENTS

We thank B.B. Thakur, K.C. Sinha, Gyan Bhusan, Ajit, Jitendra Kumar, Ram Lakhan Jha, Sushil Upadhyay, Arun Pandey, Anil Upadhyay, Anand Rai, Shakti P Singh and Manoj Rai who assisted in the fieldwork. We kindly acknowledge Priya Moorjani and Urmos Vosa for their suggestions. We are also grateful to Prof. Richard Villems and Dr. Toomas Kivisild for their helpful comments on the manuscript. This work was supported by CSIR Network Project (EpiHeD-BSC0118) to KT, DBT-RA program (fellowship to AM), P.R. Foundation (Uttar Pradesh), ICMR-SRF program (to SN), Estonian Personal Grant (PUT-766) to GC. CBM and GC acknowledge financial support from EU Regional Development fund through the Centre of Excellence in Genomics to Estonian Biocentre and University of Tartu and Estonian Institutional Research grant (IUT24-1).

REFERENCES

Adhikari K, Fontanil T, Cal S, Mendoza-Revilla J, Fuentes-Guajardo M, Chacón-Duque J-C, et al. A genome-wide association scan in admixed Latin Americans identifies loci influencing facial and scalp hair features. Nat Commun. 2016;7.

Ang KC, Ngu MS, Reid KP, Teh MS, Aida ZS, Koh DX, et al. Skin Color Variation in Orang Asli Tribes of Peninsular Malaysia. PloS One. 2012;7(8):e42752.

Anno S, Ohshima K, Abe T. Approaches to understanding adaptations of skin color variation by detecting geneenvironment interactions. Expert Rev Mol Diagn. 2010;10(8):987–91.

Beleza S, Johnson NA, Candille SI, Absher DM, Coram MA, Lopes J, et al. Genetic architecture of skin and eye color in an African-European admixed population. PLoS Genet. 2013;9(3):e1003372.

Bhasin M, Walter H. Genetics of castes and tribes of India. People. 2001;524.

Canfield VA, Berg A, Peckins S, Wentzel SM, Ang KC, Oppenheimer S, et al. Molecular phylogeography of a human autosomal skin color locus under natural selection. G3 Genes Genomes Genet. 2013;3(11):2059–67.

Chaplin G. Geographic distribution of environmental factors influencing human skin coloration. Am J Phys Anthropol. 2004;125(3):292–302.

Chaubey G, Metspalu M, Kivisild T, Villems R. Peopling of South Asia: investigating the caste–tribe continuum in India. Bioessays. 2007a;29(1):91–100.

Cook AL, Chen W, Thurber AE, Smit DJ, Smith AG, Bladen TG, et al. Analysis of cultured human melanocytes based on polymorphisms within the SLC45A2/MATP, SLC24A5/NCKX5, and OCA2/P loci. J Invest Dermatol. 2008;129(2):392–405.

Ginger RS, Askew SE, Ogborne RM, Wilson S, Ferdinando D, Dadd T, et al. SLC24A5 encodes a trans-Golgi network protein with potassium-dependent sodium-calcium exchange activity that regulates human epidermal melanogenesis. J Biol Chem. 2008;283(9):5486–95.

Hourblin V, Nouveau S, Roy N, de Lacharrière O. Skin complexion and pigmentary disorders in facial skin of 1204 women in 4 Indian cities. Indian J Dermatol Venereol Leprol. 2014;80(5):395.

Izagirre N, García I, Junquera C, De La Rúa C, Alonso S. A scan for signatures of positive selection in candidate loci for skin pigmentation in humans. Mol Biol Evol. 2006;23(9):1697.

Jablonski NG, Chaplin G. The evolution of human skin coloration. J Hum Evol. 2000;39(1):57–106.

Jablonski NG, Chaplin G. Human skin pigmentation as an adaptation to UV radiation. Proc Natl Acad Sci. 2010;107(Supplement 2):8962–8.

Jaswal I. Pigmentary variation in Indian populations. Acta Anthropogenet. 1983;7(1):75.

Jonnalagadda M, Norton H, Ozarkar S, Kulkarni S, Ashma R. Association of genetic variants with skin pigmentation phenotype among populations of west Maharashtra, India. Am J Hum Biol. 2016;

Jonnalagadda M, Ozarkar S, Ashma R, Kulkarni S. Skin pigmentation variation among populations of West Maharashtra, India. Am J Hum Biol. 2015;

Karve I. Kinship organization in India. Asia Publishing House Bombay; 1968.

Lamason RL, Mohideen MAPK, Mest JR, Wong AC, Norton HL, Aros MC, et al. SLC24A5, a putative cation exchanger, affects pigmentation in zebrafish and humans. Science.

Lao O, De Gruijter J, Van Duijn K, Navarro A, Kayser M. Signatures of positive selection in genes associated with human skin pigmentation as revealed from analyses of single nucleotide polymorphisms. Ann Hum Genet. 2007;71(3):354–69.

Liu JZ, Mcrae AF, Nyholt DR, Medland SE, Wray NR, Brown KM, et al. A versatile gene-based test for genome-wide association studies. Am J Hum Genet. 2010;87(1):139–45.

Mallick CB, Iliescu FM, Möls M, Hill S, Tamang R, Chaubey G, et al. The light skin allele of SLC24A5 in South Asians and Europeans shares identity by descent. PLoS Genet. 2013a;9(11):e1003912.

Miller CT, Beleza S, Pollen AA, Schluter D, Kittles RA, Shriver MD, et al. cis-Regulatory changes in Kit ligand expression and parallel evolution of pigmentation in sticklebacks and humans. Cell. 2007;131(6):1179–89.

Mukherjee M, Mukerjee S, Sarkar-Roy N, Ghosh T, Kalpana D, Sharma AK. Polymorphisms of four pigmentation genes (SLC45A2, SLC24A5, MC1R and TYRP1) among eleven endogamous populations of India. J Genet. 2013;92(1):135.

Rees JL. Genetics of hair and skin color. Annu Rev Genet. 2003;37(1):67–90.

Schwartzberg JE, Singer M, Cohn B. Caste regions of the North Indian plain. Struct Change Indian Soc. 1968;81–113.

Stokowski RP, Pant P, Dadd T, Fereday A, Hinds DA, Jarman C, et al. A genomewide association study of skin pigmentation in a South Asian population. Am J Hum Genet. 2007a;81(6):1119–32.

Sturm RA. Molecular genetics of human pigmentation diversity. Hum Mol Genet. 2009;18(R1):R9.

Sturm RA, Duffy DL. Human pigmentation: painting by numbers or ancestry? Pigment Cell Melanoma Res. 2013;26(5):605–6.

Thangaraj K, Joshi MB, Reddy AG, Gupta NJ, Chakravarty B, Singh L. CAG repeat expansion in the androgen receptor gene is not associated with male infertility in Indian populations. J Androl. 2002;23(6):815–8.

Thody AJ, Higgins EM, Wakamatsu K, Ito S, Burchill SA, Marks JM. Pheomelanin as well as eumelanin is present in human epidermis. J Invest Dermatol. 1991;97(2):340–4.

Tsetskhladze ZR, Canfield VA, Ang KC, Wentzel SM, Reid KP, Berg AS, et al. Functional Assessment of Human Coding Mutations Affecting Skin Pigmentation Using Zebrafish. PloS One. 2012;7(10):e47398.

Voight BF, Kudaravalli S, Wen X, Pritchard JK. A map of recent positive selection in the human genome. PLoS Biol. 2006;4(3):e72.

Williams-Blangero S, Blangero J. Skin color variation in eastern Nepal. Am J Phys Anthropol. 1991;85(3):281–91.

Model	Model description
Model 1	MI ~ rs1426654 (df=2) + Ethnic.group (df=22) + Sex (df=1)
Model 2	MI~ rs2470102 (df=2) + Ethnic.group (df=22) + Sex (df=1)
Model 3	MI~ rs2470102 (df=2) + rs1426654 (df=2) + Ethnic.group (df=22) + Sex (df=1) + rs1426654 * Ethnic.group (df=36)

Table 1: Linear models tested (Models 1-3) and their descriptions.

Figure Legends

Figure 1. Map of India showing the region under study (Middle Gangetic Plain).

In the map, dots represent the sampling locations, which include 7 districts of Uttar Pradesh and 8 districts of Bihar.

Figure 2. The structure of the human *SLC24A5* gene (chr15, 48120372–48143272: ENST00000341459).

Exons of the gene are shown in pink and introns in purple. The SNPs rs1426654 (A>G) in the third exon and rs2470102 (A>G) in the eight intron and 3' UTR variant of *MYEF2* (chr15: ENST00000324324) has been highlighted.

Figure 3. Association of rs1426654 and rs2470102 genotypes with melanin index.

A beeswarm dot plot showing (a) Association of rs1426654 genotype with melanin index in the studied cohort (b) Association of rs2470102 genotype with melanin index in the studied cohort. The black line indicates the average melanin index for each genotype AA, AG and GG.

Figure 4. Network analysis showing the relationship of nine haplotypes and distribution of the major haplotypes among four social categories.

The upper panel shows the median-joining network of the nine haplotypes (H1–H9) defined by 10 variants (made using NETWORK software www.fluxus-engineering.com). The colors represent the haplotype distribution among the four social categories included in the study. Each circle represents a haplotype. Circles are proportional to the no of chromosomes. The numbers in the figure correspond to the position of the variants as specified in Supplementary Table S5 online. The lower panel demonstrates the distribution of the three major haplotypes (H1-H3) among four social categories having 0,1 or 2 chromosomes in each haplotype.

Figure 5: Geographical distribution of allele frequencies for rs1426654 and rs2470102 SNPs.

(a) Pie charts showing the allelic frequency distribution of rs1426654 polymorphism among caste populations. (b) Pie charts showing the allelic frequency distribution of rs1426654 polymorphism among tribe populations. (c) Pie charts showing the allelic frequency distribution of rs2470102

polymorphism among caste populations. (d) Pie charts showing the allelic frequency distribution of rs2470102 polymorphism among tribe populations

These caste and tribe populations are in total, represented by 1825 individuals from 52 diverse populations of India (Supplementary Table S3 online).

Supplementary Figures

Figure S1. Histogram showing the distribution of skin pigmentation in the Middle Gangetic plain in Cohort 1 individuals.

Figure S2. Box plot showing the skin color variation across various four social categories (Cohort 1). It represents median and 25th and 75th percentiles.

Figure S3. Electropherograms of AA, AG and GG genotypes for rs1426654 and rs2470102.

Figure S4. Skin color vs haplotype distribution.

As there were less chromosomes for H4-H9 haplotypes, they have been put together.

Figure S5. Proportion of variance estimates explained by rs1426654 SNP, rs2470102 SNP and both the SNPs (rs1426654+rs2470102) together.

Figure S6. Evidence for MYEF2 mRNA being expressed in skin (melanocytes and epidermal cells, medium expression).

This data was obtained using publicly available expression data in The Protein Atlas (http://www.proteinatlas.org/ENSG00000104177-MYEF2/tissue). In the lower panel, we have evidence of has-miR-1180 being expressed in skin (125 RPM) (http://ngs.ym.edu.tw/ym500v2/knownmir.php).

Supplementary Tables

Table S1. Sample description of individuals in Cohort 1.

Table S2. Sample description of individuals in Cohort 2 with rs1426654 and rs2470102 genotyping results.

Table S3. Sample description of populations included in Cohort 3 and their average allele frequencies for rs1426654 and rs2470102 SNPs.

Table S4. Variation of melanin index across 27 ethnic groups in the studied cohort of Middle Gangetic plain (Cohort 1).

Table S5. List of variants found in the 3525bp region resequenced.

Table S6. Summary and full model results for linear Models 1-3.

Table S7. Effect of rs2470102 genotypes on skin pigmentation variation among individuals of Cohort 2

Table S8. Summary of putative microRNA (miR) targets as inferred by different web-based miRNA prediction tools for rs2470102 SNP.

Table S9. Allele frequency for rs1426654 and rs2470102 SNPs in 1825 individuals of 52 diverse populations (Cohort 3) of India grouped by social status and linguistic affiliation. It also contains allele frequency for other world populations for rs2470102 for which data is available from 1000 genomes and the respective allele frequencies for rs1426654

Table S10. List of primer sequences used in the study.

Supplementary text

Caste system in India

The caste system is a unique entity in itself and forms an integral part of the South Asian society. It refers to a tag name that gives a social and cultural identity to an individual, by birth, often identified by the surname. The traditional caste system is mainly based on the doctrine of "*Chaturvarna*", where literal meaning of "Chatur" means four and "varna" refers to classes. In earlier times, the main basis of classification was based on the actions performed by the individuals in the society, forming a hierarchy that could help the society function well as a unit. It included Brahmins (involved in teaching and religious rites), Kshatriyas (warriors or defendants), Vaishyas (traders, artisans) and Shudras (labor activities). Strict endogamy where people living in the same region or same social status maintain their unique socio-cultural identity and do not exchange genes forms the backbone of the caste system thus giving rise to 'multitude of endogamous pockets'. The caste system together with rituals and marriage practices, including strict endogamy thus create high genetic differentiation even across small distances in South Asia. The castes are further divided into sub-castes and gotras making the social structure of South Asia quite diverse as well as complex. Notably, the definition of castes have been changing over the past 500 years due to the influence of different ruling authorities. Scheduled castes (SC), Scheduled Tribes (ST), Other backward classes (OBC) are communities that have been given special name by the Constitution of India for the upliftment of their socio-economic status and their better assimilation in the society making them at par with others. SC and OBC were Shudras in the classical caste system whereas ST were considered as outcastes and were not considered a part of the classical caste system. Brahmin, Kshatriya and Vaishya represent the GENERAL category. In this manuscript, we have used these social categories as per outlined by the Government of India.

In-silico analysis of the associated SNP (Methodology)

A multiple comparison was made using five different web-based tools PolymiRTS database 3.0 (http://compbio.uthsc.edu/miRSNP/) (Bao et al. 2007; Bhattacharya et al. 2013), miRSNP (http://202.38.126.151/hmdd/mirsnp/search/) (Liu et al., 2012), mrSNP (http://mrsnp.osu.edu/) (Deveci et al., 2014), MicroSNiPer (http://epicenter.ie-freiburg.mpg.de/services/microsniper/) (Barenboim et al., 2010), Reg RNA 2.0 (http://regrna2.mbc.nctu.edu.tw/) (Chang et al., 2013). Analysis using these programs were performed using default parameters except for PolymiRTS where conservations score used was 0 instead of 2. The predictions were based on features including seed complementarity, target site accessibility, binding energy, context+ and conservation scores. Most of these applications interrogate if the SNP within the 3'UTR will disrupt/eliminate or enhance/create or modify. A target list was constructed which is shown in Supplementary Table S8 online. Further filtering steps were used that led to high confidentiality of the functional MRE (microRNA recognition elements). These involved following features - context score<-0.1, binding energy (ΔG< -20), Binding score>160, seed length>7mer (Marín and Vaníček 2012)

In-silico analysis of the associated rs2470102 SNP

We examined five web-based algorithms firstly, to identify the possible miRNAs that target the rs2470102 SNP and secondly, to predict the effect of the polymorphism on miRNA::mRNA binding process. The predicted miRNAs interacting with the SNP varied across the different web-based tools (Supplementary Table S8). Our bioinformatics analyses suggested rs2470102 SNP (C>T *MYEF2*, A>G *SLC24A5*) creates, disrupts or alters the binding of the 14 candidate miRNAs (Supplementary Table S8). Of these, miR-1180 was a predicted target suggested by three of the five independent web-tools used. Hence, we hypothesize that rs2470102 might be affecting the skin pigmentation by regulation through miRNA binding processes.

To improve our understanding of the interaction between the suggested miRNA (has-mir-1180) and rs2470102 SNP, we used publicly available data to investigate whether they are co-expressed in the same tissue. We found that both mir-1180 (125 RPM) and *MYEF2* show expression in skin (Supplementary Figure S4 online). Furthermore, our results are consistent with Pant et al. (2006) study, where they observed *MYEF2* to be expressed in skin and melanocytes (Pant et al., 2006). The same study revealed that skin biopsies derived from volunteers with darker skin showed higher transcript levels for *MYEF2* compared to volunteers with lighter skin. Nevertheless, suggested role of the SNP requires confirmation using functional assays, albeit the bioinformatics predictions narrows down the number of microRNA targets for experimental validation.

Recently, the importance of miRSNPs has been also investigated in pigmentation genes. miRNA mediated regulation has been suggested for pigmentation gene TRYP1 through miR-155 (Li et al., 2012). Therefore, miRNA-mediated regulation of pigmentation genes can be one of the key players of natural skin pigmentation variation and the present study adds further evidence towards the hypothesis.

References

Bao L, Zhou M, Wu L, Lu L, Goldowitz D, Williams RW, et al. PolymiRTS Database: linking polymorphisms in microRNA target sites with complex traits. Nucleic Acids Res. 2007;35(suppl 1):D51–4.

Barenboim M, Zoltick BJ, Guo Y, Weinberger DR. MicroSNiPer: a web tool for prediction of SNP effects on putative microRNA targets. Hum Mutat. 2010;31(11):1223–32.

Bhattacharya A, Ziebarth JD, Cui Y. PolymiRTS Database 3.0: linking polymorphisms in microRNAs and their target sites with human diseases and biological pathways. Nucleic Acids Res. 2013;gkt1028.

Chang T-H, Huang H-Y, Hsu JB, Weng S-L, Horng J-T, Huang H-D. An enhanced computational platform for investigating the roles of regulatory RNA and for identifying functional RNA motifs. BMC Bioinformatics. 2013;14(Suppl 2):S4.

Deveci M, Çatalyürek ÜV, Toland AE. mrSNP: Software to detect SNP effects on microRNA binding. BMC Bioinformatics. 2014;15(1):73.

Li J, Liu Y, Xin X, Kim TS, Cabeza EA, Ren J, et al. Evidence for positive selection on a number of microRNA regulatory interactions during recent human evolution. PLoS Genet. 2012;8(3):e1002578.

Liu C, Zhang F, Li T, Lu M, Wang L, Yue W, et al. MirSNP, a database of polymorphisms altering miRNA target sites, identifies miRNA-related SNPs in GWAS SNPs and eQTLs. BMC Genomics. 2012;13(1):661.

Marín RM, Vaníček J. Optimal use of conservation and accessibility filters in microRNA target prediction. PloS One. 2012;7(2):e32208.

Pant K, Stokowski R, Cox D, Green M, Van Der Ouderaa F, Ginger R, et al. Modulation of skin color. 2006 Sep 1;

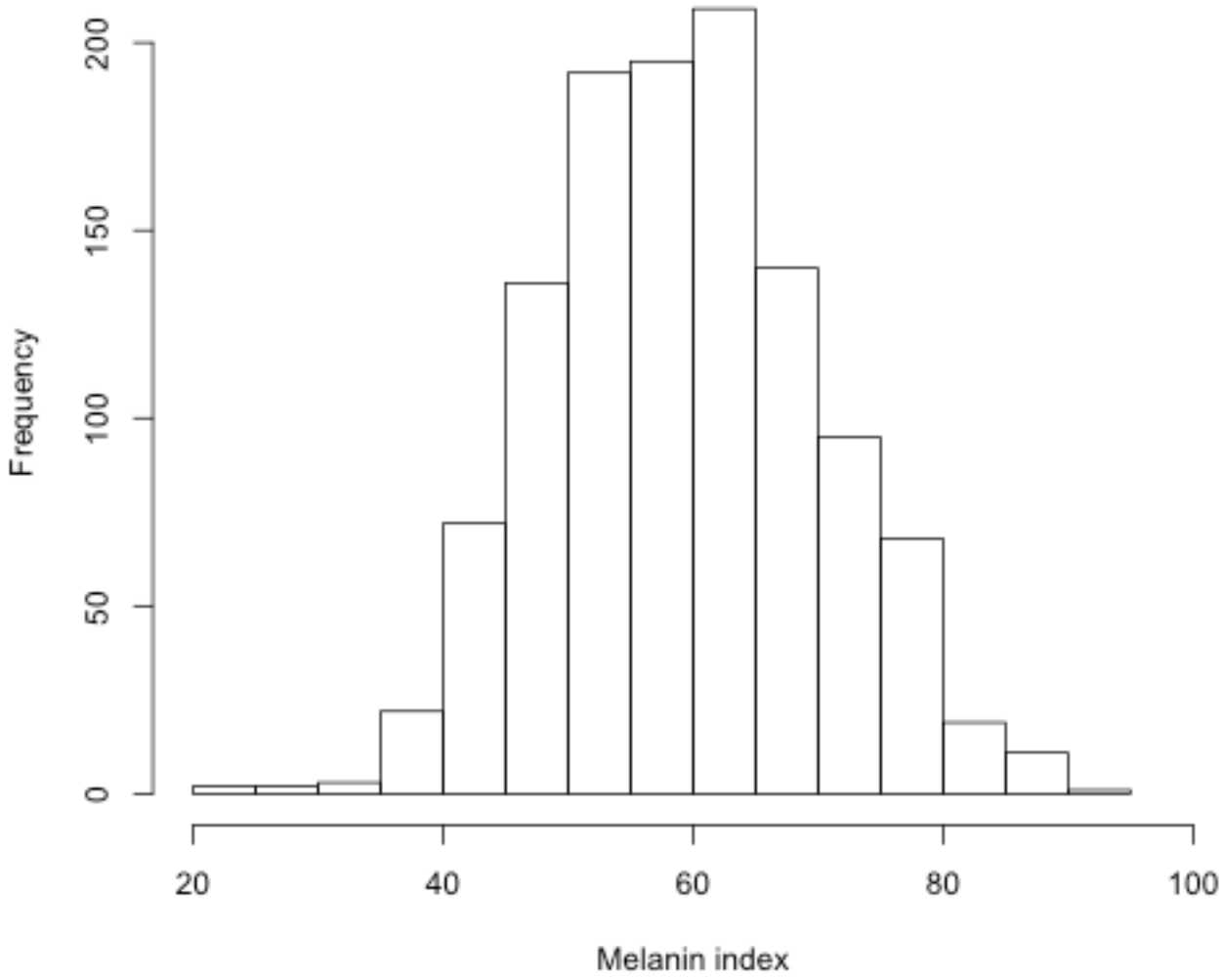
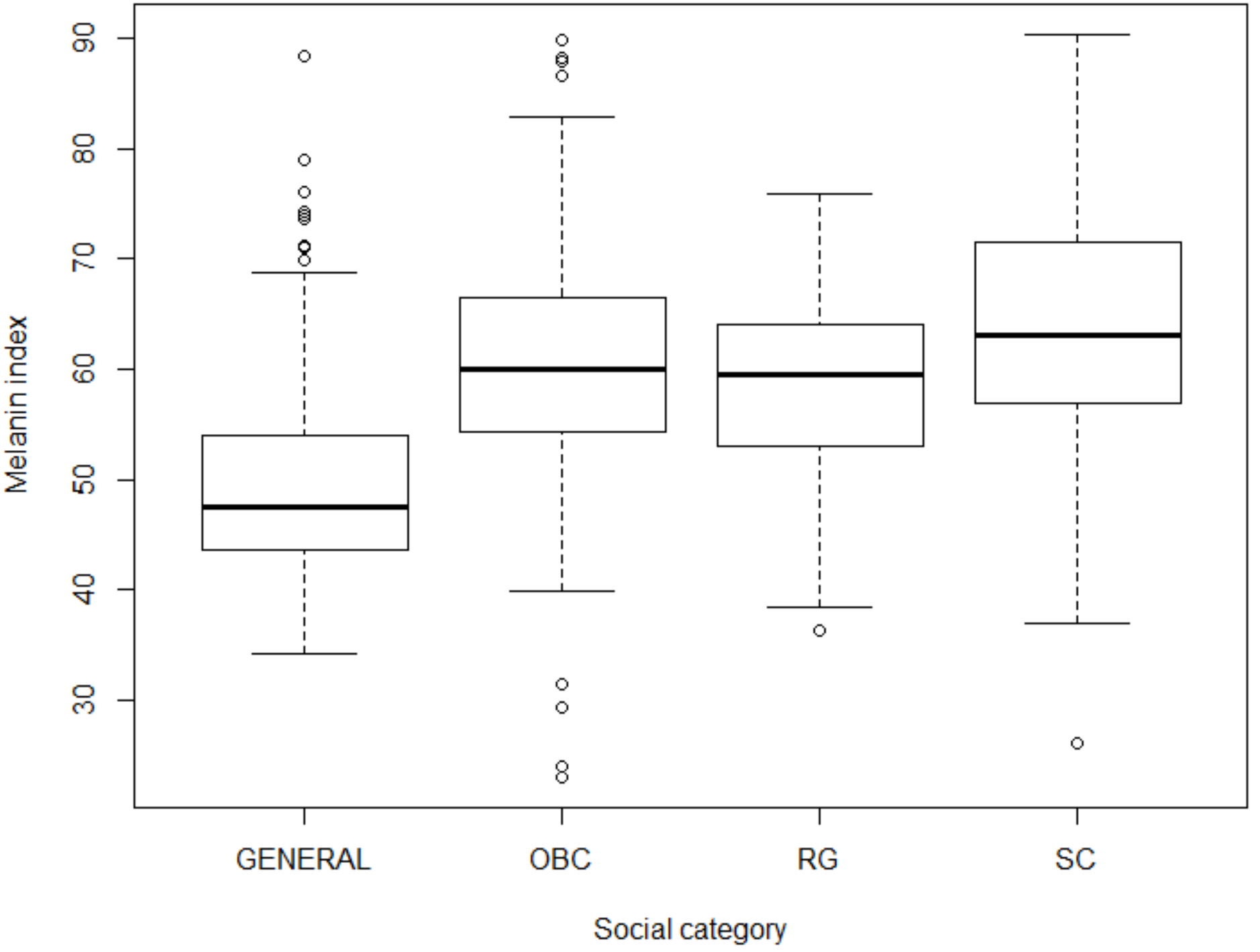


Figure S1. Histogram showing the distribution of skin pigmentation in the Middle Gangetic plain in Cohort 1 individuals.

Figure S2. Box plot showing the skin color variation across various four social categories (Cohort 1). It represents median and 25th and 75th percentiles.



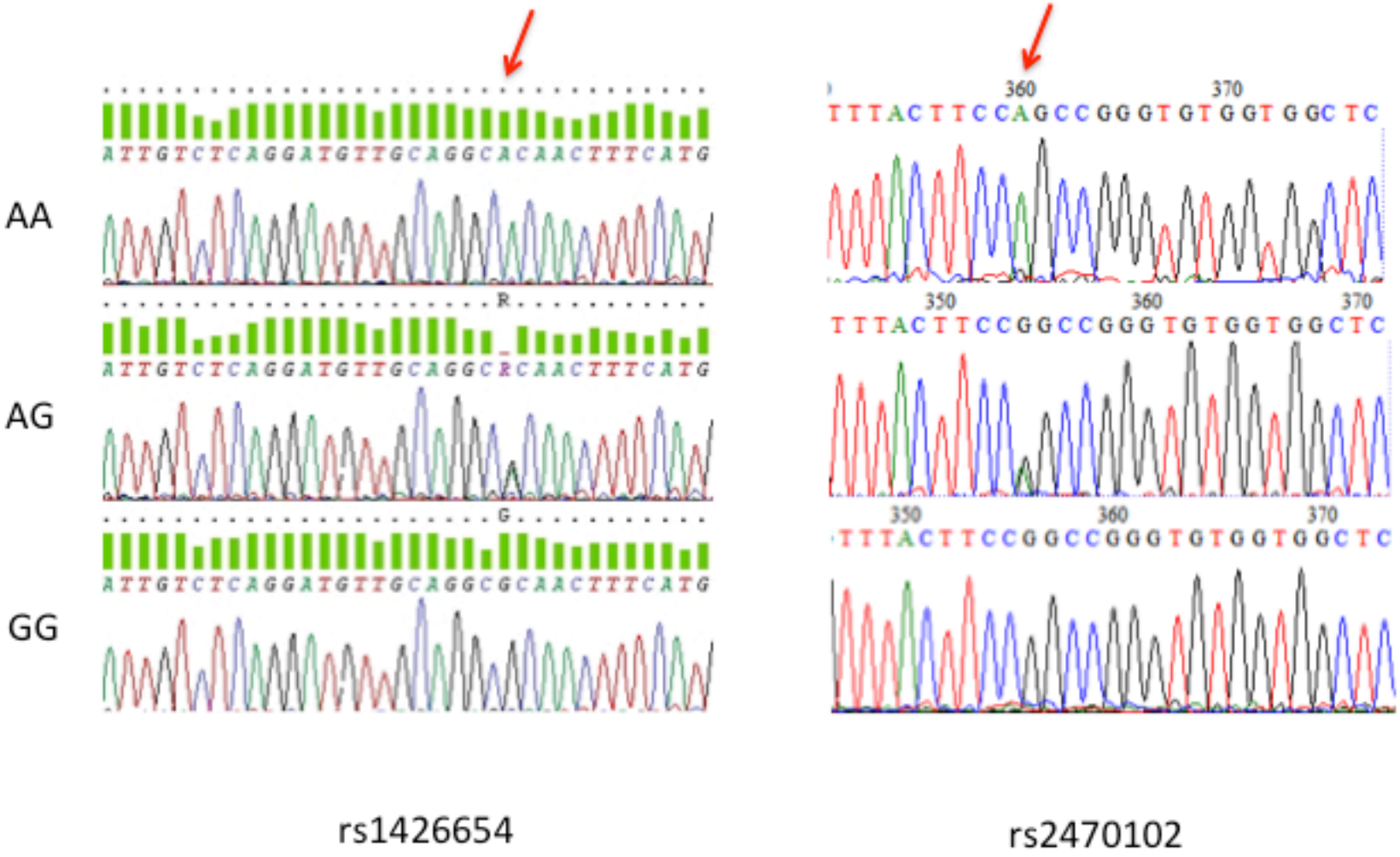


Figure S3. Electropherograms of AA, AG and GG genotypes for rs1426654 and rs2470102.

MYEF2

TISSUE | SUBCELL | RNA CELL LINE | CANCER

ANTIBODY PRIMARY DATA

Antibodies in assay HPA004883

Tissue presentation order: Organ | Cell type | Alphabetical

Tissue		Antibody staining	Annotated expression
Liver and pancreas			
Liver	Hepatocytes	Not detected	Not detected
Liver	Bile duct cells	High	High
Gallbladder	Glandular cells	High	High
Pancreas	Exocrine glandular cells	Medium	Medium
Pancreas	Islets of Langerhans	High	High
Digestive tract (GI-tract)			
Oral mucosa	Squamous epithelial cells	Medium	Medium

Tissue		Antibody staining	Annotated expression
Skin and soft tissues			
Skin 1	Fibroblasts	Low	Low
Skin 1	Keratinocytes	Low	Low
Skin 1	Langerhans	Low	Low
Skin 1	Melanocytes	Medium	Medium
Skin 2	Epidermal cells	Medium	Medium
Skeletal muscle	Myocytes	Not detected	Low
Smooth muscle	Smooth muscle cells	Not detected	Not detected

Level of antibody staining/expression: High, Medium, Low, Not detected

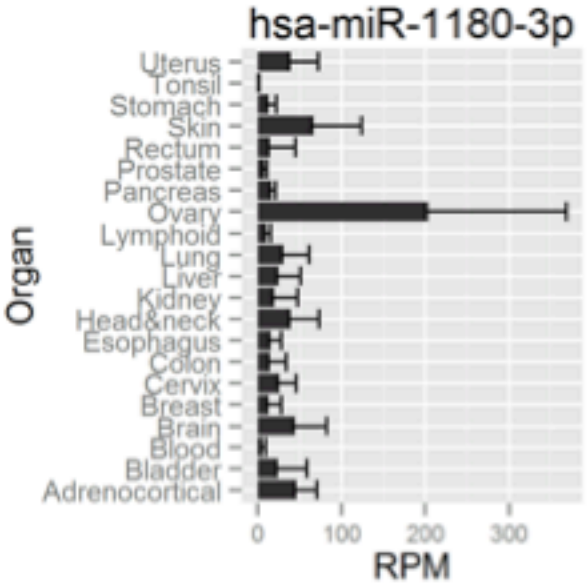
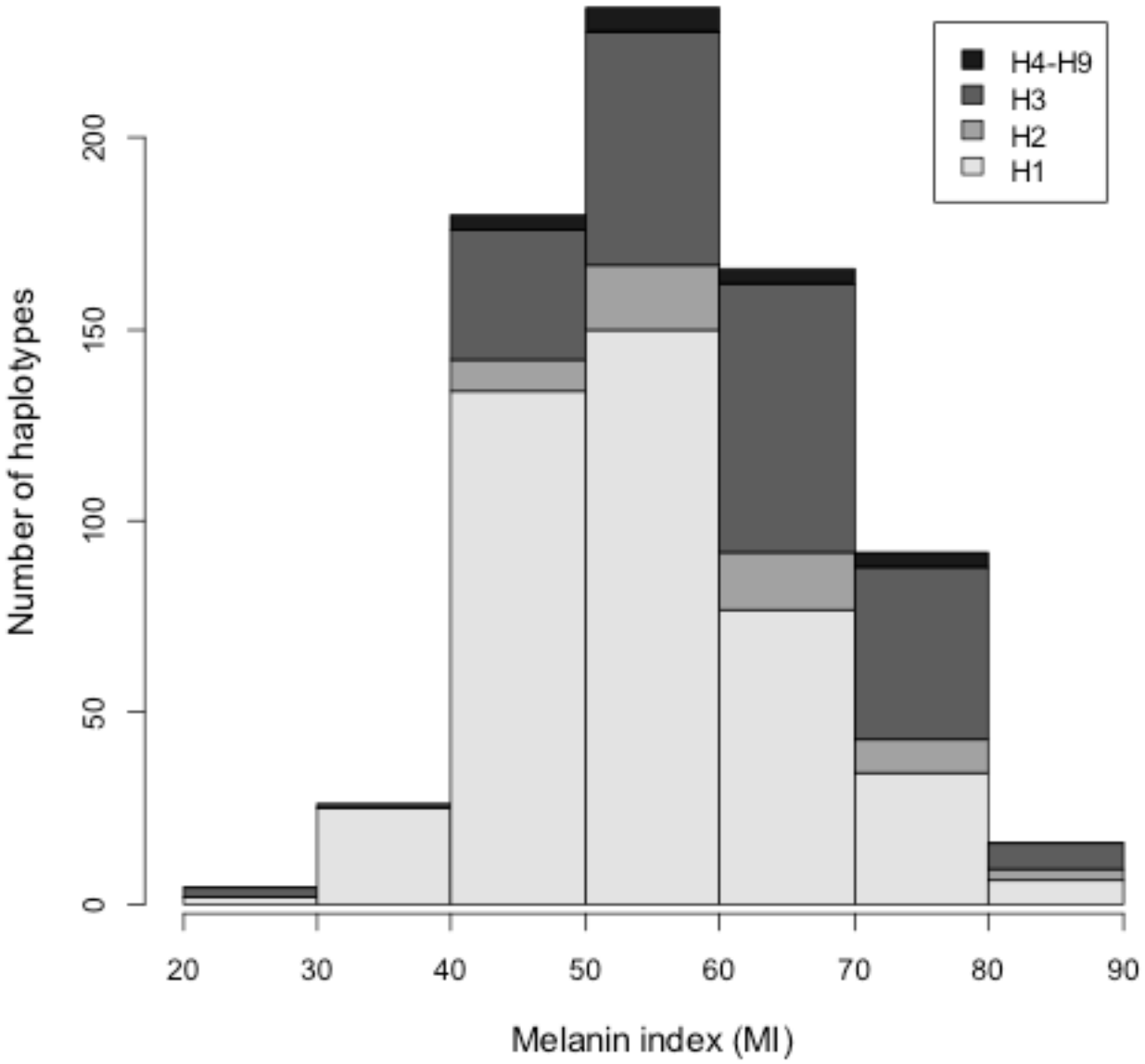


Figure S4. Evidence for MYEF2 mRNA being expressed in skin (melanocytes and epidermal cells, medium expression).
This data was obtained using publicly available expression data in The Protein Atlas (http://www.proteinatlas.org/ENSG00000104177-MYEF2/tissue). In the lower panel, we have evidence of has-miR-1180 being expressed in skin (125 RPM) (http://ngs.ym.edu.tw/ym500v2/knownmir.php).

Figure S5. Skin color vs haplotype distribution.
As there were less chromosomes for H4-H9 haplotypes, they have been put together.



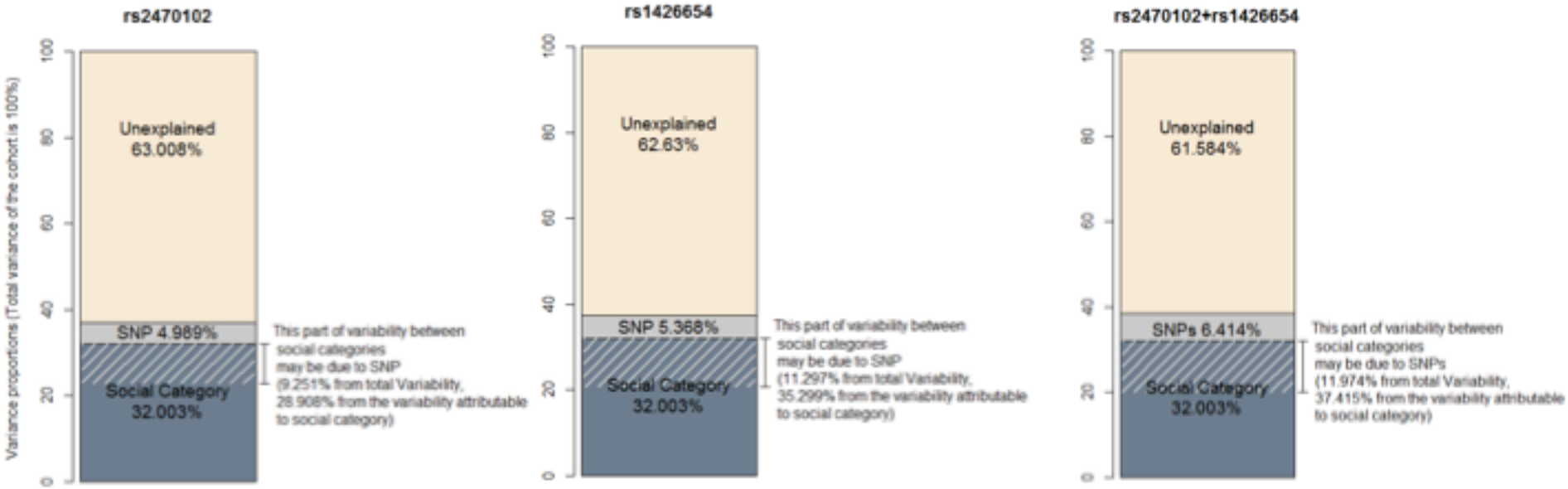


Figure S6. Proportion of variance estimates explained by rs1426654 SNP, rs2470102 SNP and both the SNPs (rs1426654+rs2470102) together.

Table S1. Sample description of individuals in Cohort 1.

Sl no	Sample ID	CASTE	SEX	AGE	DISTRICT	STATE	AVG MI
1	10146	YADAV	M	35	MUZAFFARPUR	BIHAR	68.15
2	10794	YADAV	F	38	PATNA	BIHAR	61.15
3	10796	YADAV	M	33	VARANASI	UTTAR PRADESH	45.1
4	10835	YADAV	M	63	PATNA	BIHAR	61.8
5	10838	YADAV	M	45	PATNA	BIHAR	50.9
6	10839	YADAV	M	20	PATNA	BIHAR	73.15
7	10858	YADAV	M	45	PATNA	BIHAR	69.3
8	10884	YADAV	M	50	ALLAHABAD	UTTAR PRADESH	48.9
9	10886	YADAV	F	10	PATNA	BIHAR	66.15
10	10895	YADAV	M	28	PATNA	BIHAR	45.1
11	10966	YADAV	M	27	JAUNPUR	UTTAR PRADESH	51.65
12	7607	YADAV	M	30	VARANASI	UTTAR PRADESH	64
13	64	YADAV	M	40	MUZAFFARPUR	BIHAR	47
14	66	YADAV	M	78	MUZAFFARPUR	BIHAR	61
15	10007	THAKUR	M	12	MUZAFFARPUR	BIHAR	69.85
16	10087	THAKUR	M	40	MUZAFFARPUR	BIHAR	76.1
17	10097	THAKUR	M	43	MUZAFFARPUR	BIHAR	56.9
18	10120	THAKUR	M	50	MUZAFFARPUR	BIHAR	68.7
19	10165	THAKUR	M	34	MUZAFFARPUR	BIHAR	73.7
20	10229	THAKUR	M	13	MUZAFFARPUR	BIHAR	74
21	10237	THAKUR	M	7	MUZAFFARPUR	BIHAR	57
22	10267	THAKUR	F	11	MUZAFFARPUR	BIHAR	61
23	10268	THAKUR	F	46	MUZAFFARPUR	BIHAR	65
24	10301	THAKUR	F	45	MUZAFFARPUR	BIHAR	62.1
25	10370	THAKUR	M	19	MUZAFFARPUR	BIHAR	71
26	10393	THAKUR	M	24	MUZAFFARPUR	BIHAR	48
27	10465	THAKUR	F	13	MUZAFFARPUR	BIHAR	74.3
28	10489	THAKUR	M	62	MUZAFFARPUR	BIHAR	50.3
29	10512	THAKUR	M	54	MOTIHARI	BIHAR	63.7
30	10515	THAKUR	F	41	MOTIHARI	BIHAR	79
31	10516	THAKUR	F	46	MOTIHARI	BIHAR	63.7
32	10517	THAKUR	F	40	MOTIHARI	BIHAR	54.3
33	10518	THAKUR	F	43	MOTIHARI	BIHAR	63.4
34	10542	THAKUR	M	22	MUZAFFARPUR	BIHAR	58.8
35	10562	THAKUR	M	46	MUZAFFARPUR	BIHAR	88.4
36	10603	THAKUR	M	74	MUZAFFARPUR	BIHAR	58.85
37	10629	THAKUR	M	42	MUZAFFARPUR	BIHAR	58.9
38	10630	THAKUR	F	40	MUZAFFARPUR	BIHAR	57.4
39	10631	THAKUR	M	45	MUZAFFARPUR	BIHAR	66.4
40	10632	THAKUR	F	46	MUZAFFARPUR	BIHAR	63.3
41	10635	THAKUR	F	49	MOTIHARI	BIHAR	68.75
42	10636	THAKUR	F	41	MUZAFFARPUR	BIHAR	57.5
43	10659	THAKUR	F	45	MUZAFFARPUR	BIHAR	57.5
44	10660	THAKUR	F	45	MUZAFFARPUR	BIHAR	58.35
45	10837	THAKUR	F	27	PATNA	BIHAR	61.6
46	10857	THAKUR	F	25	PATNA	BIHAR	60.1
47	10896	THAKUR	M	6	VAISHALI	BIHAR	51.05
48	10922	THAKUR	M	10	MUZAFFARPUR	BIHAR	66.45
49	10576	SRIVASTAVA	F	46	MUZAFFARPUR	BIHAR	46.8
50	10677	SRIVASTAVA	M	26	VARANASI	UTTAR PRADESH	42.55
51	10721	SRIVASTAVA	M	41	MIRZAPUR	UTTAR PRADESH	55
52	10722	SRIVASTAVA	M	45	HAMIRPUR	UTTAR PRADESH	52.2
53	10780	SRIVASTAVA	M	33	VARANASI	UTTAR PRADESH	44.15
54	10894	SRIVASTAVA	M	11	PATNA	BIHAR	58.7
55	10976	SRIVASTAVA	F	29	AARA	BIHAR	44.1
56	10977	SRIVASTAVA	M	35	LUCKNOW	UTTAR PRADESH	41
57	10978	SRIVASTAVA	M	37	VARANASI	UTTAR PRADESH	47.7
58	7617	SRIVASTAVA	F	25	KANPUR	UTTAR PRADESH	38.4
59	127	SRIVASTAVA	M	52	MUZAFFARPUR	BIHAR	59
60	160	SRIVASTAVA	M	18	MUZAFFARPUR	BIHAR	52.6
61	169	SRIVASTAVA	M	21	MUZAFFARPUR	BIHAR	44.8
62	10064	SINGH	M	55	MUZAFFARPUR	BIHAR	54.5
63	10086	SINGH	M	48	MUZAFFARPUR	BIHAR	69.7
64	10089	SINGH	M	60	MUZAFFARPUR	BIHAR	64.8
65	10124	SINGH	M	35	MUZAFFARPUR	BIHAR	48.4
66	10148	SINGH	F	19	MUZAFFARPUR	BIHAR	50.8
67	10149	SINGH	M	65	MUZAFFARPUR	BIHAR	63.7
68	10150	SINGH	M	49	MUZAFFARPUR	BIHAR	48.9
69	10158	SINGH	F	43	MUZAFFARPUR	BIHAR	65.2
70	10198	SINGH	M	56	MUZAFFARPUR	BIHAR	74.9
71	10299	SINGH	F	37	MUZAFFARPUR	BIHAR	54
72	10300	SINGH	M	43	MUZAFFARPUR	BIHAR	58
73	10302	SINGH	M	35	MUZAFFARPUR	BIHAR	58
74	10318	SINGH	F	40	MUZAFFARPUR	BIHAR	55
75	10360	SINGH	M	62	MUZAFFARPUR	BIHAR	54.4
76	10387	SINGH	M	62	MUZAFFARPUR	BIHAR	53.15

77	10416	SINGH	M	40	MUZAFFARPUR	BIHAR	73.15
78	10541	SINGH	M	56	MUZAFFARPUR	BIHAR	53.8
79	10543	SINGH	M	61	MUZAFFARPUR	BIHAR	58.8
80	10961	SINGH	M	33	GORAKHPUR	UTTAR PRADESH	44.55
81	36	SINGH	M	56	MUZAFFARPUR	BIHAR	65
82	42	SINGH	M	40	MUZAFFARPUR	BIHAR	58
83	43	SINGH	M	26	MUZAFFARPUR	BIHAR	57
84	78	SINGH	M	21	MUZAFFARPUR	BIHAR	44
85	135	SINGH	M	62	MUZAFFARPUR	BIHAR	71
86	167	SINGH	M	18	MUZAFFARPUR	BIHAR	53.75
87	168	SINGH	F	19	MUZAFFARPUR	BIHAR	45.8
88	10026	SHARMA	M	12	MUZAFFARPUR	BIHAR	63.85
89	10027	SHARMA	M	12	MUZAFFARPUR	BIHAR	70.85
90	10059	SHARMA	M	62	MUZAFFARPUR	BIHAR	71
91	10432	SHARMA	M	29	MUZAFFARPUR	BIHAR	61.3
92	10456	SHARMA	M	29	MUZAFFARPUR	BIHAR	63.7
93	10459	SHARMA	M	48	MUZAFFARPUR	BIHAR	54.6
94	10574	SHARMA	M	49	MUZAFFARPUR	BIHAR	54.8
95	10011	SAHNI	M	36	MUZAFFARPUR	BIHAR	59.8
96	10012	SAHNI	F	6	MUZAFFARPUR	BIHAR	53.45
97	10046	SAHNI	M	21	MUZAFFARPUR	BIHAR	71
98	10056	SAHNI	F	16	MUZAFFARPUR	BIHAR	61.15
99	10057	SAHNI	F	16	MUZAFFARPUR	BIHAR	65.15
100	10063	SAHNI	M	59	SITAMADHI	BIHAR	66.85
101	10072	SAHNI	M	24	MUZAFFARPUR	BIHAR	61.7
102	10073	SAHNI	M	50	MUZAFFARPUR	BIHAR	65.3
103	10074	SAHNI	F	39	MUZAFFARPUR	BIHAR	63.2
104	10075	SAHNI	F	44	VAISHALI	BIHAR	64.9
105	10076	SAHNI	M	43	VAISHALI	BIHAR	67.9
106	10077	SAHNI	M	13	MUZAFFARPUR	BIHAR	63.2
107	10079	SAHNI	F	51	MUZAFFARPUR	BIHAR	70.7
108	10080	SAHNI	F	48	MUZAFFARPUR	BIHAR	73.7
109	10114	SAHNI	M	38	MUZAFFARPUR	BIHAR	64.8
110	10115	SAHNI	F	40	MUZAFFARPUR	BIHAR	68
111	10183	SAHNI	F	30	VAISHALI	BIHAR	57.5
112	10199	SAHNI	F	8	VAISHALI	BIHAR	57.3
113	10203	SAHNI	F	46	VAISHALI	BIHAR	59.4
114	10204	SAHNI	M	12	VAISHALI	BIHAR	78.6
115	10205	SAHNI	F	29	VAISHALI	BIHAR	80.2
116	10226	SAHNI	F	19	MUZAFFARPUR	BIHAR	50
117	10236	SAHNI	F	39	MUZAFFARPUR	BIHAR	62
118	10253	SAHNI	F	54	MUZAFFARPUR	BIHAR	67
119	10254	SAHNI	M	34	MUZAFFARPUR	BIHAR	50
120	10309	SAHNI	M	34	MUZAFFARPUR	BIHAR	66
121	10310	SAHNI	M	43	MUZAFFARPUR	BIHAR	62
122	10340	SAHNI	M	68	MUZAFFARPUR	BIHAR	70
123	10379	SAHNI	M	33	MUZAFFARPUR	BIHAR	71.5
124	10380	SAHNI	M	59	MUZAFFARPUR	BIHAR	78.35
125	10381	SAHNI	F	26	MUZAFFARPUR	BIHAR	81.55
126	10382	SAHNI	M	18	MUZAFFARPUR	BIHAR	67.45
127	10383	SAHNI	M	34	MUZAFFARPUR	BIHAR	68.85
128	10384	SAHNI	F	14	MUZAFFARPUR	BIHAR	60.05
129	10386	SAHNI	F	28	MUZAFFARPUR	BIHAR	77.25
130	10462	SAHNI	M	11	MUZAFFARPUR	BIHAR	61.65
131	10464	SAHNI	F	61	MUZAFFARPUR	BIHAR	76.65
132	10490	SAHNI	M	34	MUZAFFARPUR	BIHAR	62.9
133	10504	SAHNI	M	34	VAISHALI	BIHAR	67
134	10511	SAHNI	M	63	MUZAFFARPUR	BIHAR	68
135	10536	SAHNI	M	46	MUZAFFARPUR	BIHAR	62.5
136	10575	SAHNI	F	13	MUZAFFARPUR	BIHAR	58.5
137	10663	SAHNI	M	42	MUZAFFARPUR	BIHAR	62.2
138	10664	SAHNI	M	28	MUZAFFARPUR	BIHAR	60.85
139	10666	SAHNI	M	56	MUZAFFARPUR	BIHAR	71.2
140	10667	SAHNI	M	70	MUZAFFARPUR	BIHAR	77.9
141	10668	SAHNI	M	18	MUZAFFARPUR	BIHAR	53.4
142	10669	SAHNI	F	54	MUZAFFARPUR	BIHAR	54.9
143	10670	SAHNI	F	52	MUZAFFARPUR	BIHAR	75.85
144	10671	SAHNI	F	60	MUZAFFARPUR	BIHAR	54.5
145	10792	SAHNI	F	40	VAISHALI	BIHAR	66.6
146	10910	SAHNI	F	39	MUZAFFARPUR	BIHAR	63.65
147	10911	SAHNI	F	34	MUZAFFARPUR	BIHAR	51.05
148	10915	SAHNI	M	31	MUZAFFARPUR	BIHAR	52.4
149	10916	SAHNI	F	22	MUZAFFARPUR	BIHAR	51.7
150	10917	SAHNI	F	42	MUZAFFARPUR	BIHAR	61.25
151	10920	SAHNI	F	8	MUZAFFARPUR	BIHAR	71.95
152	10921	SAHNI	F	36	MUZAFFARPUR	BIHAR	60.4
153	10943	SAHNI	M	8	MUZAFFARPUR	BIHAR	74.85
154	10945	SAHNI	M	21	MUZAFFARPUR	BIHAR	46.2
155	10953	SAHNI	F	60	MUZAFFARPUR	BIHAR	59

156	10954	SAHNI	F	45	MUZAFFARPUR	BIHAR	54.05
157	10956	SAHNI	M	18	MUZAFFARPUR	BIHAR	59.25
158	10957	SAHNI	F	46	MUZAFFARPUR	BIHAR	54.35
159	5277	SAHNI	M	18	MUZAFFARPUR	BIHAR	54.05
160	5278	SAHNI	M	45	MUZAFFARPUR	BIHAR	47.2
161	5280	SAHNI	F	10	MUZAFFARPUR	BIHAR	55.6
162	5283	SAHNI	M	16	MUZAFFARPUR	BIHAR	63
163	5286	SAHNI	F	46	MUZAFFARPUR	BIHAR	52.8
164	5287	SAHNI	F	58	MUZAFFARPUR	BIHAR	51.95
165	5288	SAHNI	F	29	MUZAFFARPUR	BIHAR	53
166	5292	SAHNI	M	23	MUZAFFARPUR	BIHAR	72.6
167	5295	SAHNI	M	36	MUZAFFARPUR	BIHAR	66.55
168	77	SAHNI	M	18	MUZAFFARPUR	BIHAR	55
169	166	SAHNI	M	21	MUZAFFARPUR	BIHAR	60.2
170	7608	SAHITWAR	M	48	GORAKHPUR	UTTAR PRADESH	44.4
171	7610	SAHITWAR	M	40	GORAKHPUR	UTTAR PRADESH	52
172	UP-G1	SAHITWAR	F	50	GORAKHPUR	UTTAR PRADESH	65
173	UP-G2	SAHITWAR	M	32	GORAKHPUR	UTTAR PRADESH	52
174	UP-G3	SAHITWAR	M	67	GORAKHPUR	UTTAR PRADESH	55
175	UP-G4	SAHITWAR	M	28	GORAKHPUR	UTTAR PRADESH	48.4
176	UP-G5	SAHITWAR	M	33	GORAKHPUR	UTTAR PRADESH	58.8
177	10491	SAH	M	41	MUZAFFARPUR	BIHAR	53.4
178	10581	SAH	M	32	MUZAFFARPUR	BIHAR	50.3
179	10793	SAH	M	40	PATNA	BIHAR	46.4
180	10010	SAH	M	12	MUZAFFARPUR	BIHAR	65.3
181	10017	SAH	M	52	MUZAFFARPUR	BIHAR	55.8
182	10023	SAH	M	8	MUZAFFARPUR	BIHAR	58.25
183	10047	SAH	M	19	MUZAFFARPUR	BIHAR	70
184	10088	SAH	M	20	MUZAFFARPUR	BIHAR	60.2
185	10092	SAH	M	40	MUZAFFARPUR	BIHAR	29.4
186	10095	SAH	F	9	MUZAFFARPUR	BIHAR	66
187	10164	SAH	M	33	MUZAFFARPUR	BIHAR	67
188	10174	SAH	F	49	MUZAFFARPUR	BIHAR	62
189	10184	SAH	F	34	MUZAFFARPUR	BIHAR	69
190	10227	SAH	F	11	MUZAFFARPUR	BIHAR	67
191	10230	SAH	M	7	MUZAFFARPUR	BIHAR	62
192	10243	SAH	M	6	MUZAFFARPUR	BIHAR	60
193	10247	SAH	F	16	MUZAFFARPUR	BIHAR	58
194	10291	SAH	M	24	MUZAFFARPUR	BIHAR	70
195	10297	SAH	M	40	MUZAFFARPUR	BIHAR	60
196	10316	SAH	F	35	MUZAFFARPUR	BIHAR	60
197	10319	SAH	M	32	MUZAFFARPUR	BIHAR	58
198	10322	SAH	F	30	MUZAFFARPUR	BIHAR	58
199	10356	SAH	M	37	MUZAFFARPUR	BIHAR	49.4
200	10388	SAH	M	13	MUZAFFARPUR	BIHAR	65.5
201	10389	SAH	F	14	MUZAFFARPUR	BIHAR	57.55
202	10392	SAH	M	14	MUZAFFARPUR	BIHAR	64.5
203	10441	SAH	M	45	MOTIHARI	BIHAR	62.3
204	10443	SAH	M	13	MOTIHARI	BIHAR	58.4
205	10444	SAH	F	36	MOTIHARI	BIHAR	75
206	10451	SAH	F	12	MOTIHARI	BIHAR	63.1
207	10502	SAH	M	18	MUZAFFARPUR	BIHAR	88.3
208	10595	SAH	F	42	MUZAFFARPUR	BIHAR	59.8
209	10605	SAH	F	56	MUZAFFARPUR	BIHAR	64.9
210	10606	SAH	M	23	MUZAFFARPUR	BIHAR	46.1
211	10607	SAH	M	48	MUZAFFARPUR	BIHAR	47.9
212	10650	SAH	M	28	MUZAFFARPUR	BIHAR	58.3
213	10651	SAH	M	45	MUZAFFARPUR	BIHAR	54.9
214	10652	SAH	M	66	MUZAFFARPUR	BIHAR	77.15
215	10654	SAH	M	73	MUZAFFARPUR	BIHAR	63.15
216	10661	SAH	M	45	MUZAFFARPUR	BIHAR	65.65
217	10665	SAH	M	52	MUZAFFARPUR	BIHAR	54.1
218	10836	SAH	M	33	HAZIPUR	BIHAR	46
219	10903	SAH	F	46	MUZAFFARPUR	BIHAR	61
220	10908	SAH	M	8	MUZAFFARPUR	BIHAR	65.6
221	10909	SAH	M	42	MUZAFFARPUR	BIHAR	70.1
222	10914	SAH	M	65	MUZAFFARPUR	BIHAR	79.5
223	10918	SAH	M	11	MUZAFFARPUR	BIHAR	57.85
224	10923	SAH	M	6	MUZAFFARPUR	BIHAR	61.5
225	28	SAH	F	22	MUZAFFARPUR	BIHAR	74
226	29	SAH	F	39	MUZAFFARPUR	BIHAR	71
227	33	SAH	F	46	MUZAFFARPUR	BIHAR	47
228	97	SAH	M	54	MUZAFFARPUR	BIHAR	63
229	99	SAH	M	10	MUZAFFARPUR	BIHAR	75
230	101	SAH	F	40	MUZAFFARPUR	BIHAR	75
231	126	SAH	F	34	MUZAFFARPUR	BIHAR	70.6
232	154	SAH	M	22	MUZAFFARPUR	BIHAR	55.8
233	161	SAH	F	20	MUZAFFARPUR	BIHAR	48.2
234	163	SAH	M	36	MUZAFFARPUR	BIHAR	50.1

235	178-5424	SAH	M	20	MUZAFFARPUR	BIHAR	60.6
236	10573	RAM	M	50	MUZAFFARPUR	BIHAR	60.7
237	10013	RAM	F	10	MUZAFFARPUR	BIHAR	66.75
238	10048	RAM	F	18	MOTIHARI	BIHAR	55.4
239	10070	RAM	M	33	MUZAFFARPUR	BIHAR	51.4
240	10104	RAM	M	8	MUZAFFARPUR	BIHAR	68.5
241	10117	RAM	F	18	MUZAFFARPUR	BIHAR	55.4
242	10118	RAM	F	48	MUZAFFARPUR	BIHAR	65.5
243	10119	RAM	F	50	MUZAFFARPUR	BIHAR	59.8
244	10128	RAM	M	11	MUZAFFARPUR	BIHAR	67.8
245	10129	RAM	F	11	MUZAFFARPUR	BIHAR	73.4
246	10130	RAM	M	11	MUZAFFARPUR	BIHAR	52.4
247	10131	RAM	F	19	MUZAFFARPUR	BIHAR	74.9
248	10132	RAM	M	8	MUZAFFARPUR	BIHAR	76.6
249	10133	RAM	F	26	MUZAFFARPUR	BIHAR	59.4
250	10134	RAM	M	53	MUZAFFARPUR	BIHAR	76.5
251	10151	RAM	M	26	MUZAFFARPUR	BIHAR	66.7
252	10167	RAM	M	56	MUZAFFARPUR	BIHAR	82.7
253	10168	RAM	F	53	MUZAFFARPUR	BIHAR	68
254	10176	RAM	M	41	MUZAFFARPUR	BIHAR	68.2
255	10181	RAM	F	15	MOTIHARI	BIHAR	68.6
256	10202	RAM	F	17	VAISHALI	BIHAR	70.7
257	10206	RAM	F	13	VAISHALI	BIHAR	60.9
258	10207	RAM	F	58	VAISHALI	BIHAR	58.4
259	10208	RAM	M	12	VAISHALI	BIHAR	68
260	10210	RAM	M	56	VAISHALI	BIHAR	70.7
261	10212	RAM	M	37	MUZAFFARPUR	BIHAR	51.8
262	10213	RAM	F	34	MUZAFFARPUR	BIHAR	63.7
263	10215	RAM	M	51	MUZAFFARPUR	BIHAR	71.5
264	10223	RAM	M	20	MUZAFFARPUR	BIHAR	80
265	10240	RAM	M	46	MUZAFFARPUR	BIHAR	60
266	10296	RAM	M	35	MUZAFFARPUR	BIHAR	72
267	10321	RAM	M	47	MUZAFFARPUR	BIHAR	71
268	10334	RAM	M	31	MUZAFFARPUR	BIHAR	52
269	10349	RAM	M	46	MUZAFFARPUR	BIHAR	63
270	10353	RAM	F	11	SITAMADHI	BIHAR	52.2
271	10415	RAM	M	45	MUZAFFARPUR	BIHAR	60.65
272	10425	RAM	M	8	MUZAFFARPUR	BIHAR	66.3
273	10426	RAM	M	38	MUZAFFARPUR	BIHAR	70.8
274	10427	RAM	M	52	MUZAFFARPUR	BIHAR	85.05
275	10428	RAM	M	51	MUZAFFARPUR	BIHAR	64.7
276	10429	RAM	M	49	MUZAFFARPUR	BIHAR	54.5
277	10442	RAM	M	47	MOTIHARI	BIHAR	77.4
278	10446	RAM	M	56	MOTIHARI	BIHAR	58
279	10447	RAM	F	28	MOTIHARI	BIHAR	57.2
280	10457	RAM	M	9	MUZAFFARPUR	BIHAR	52.1
281	10461	RAM	F	36	MUZAFFARPUR	BIHAR	74.25
282	10498	RAM	F	64	MUZAFFARPUR	BIHAR	59.5
283	10499	RAM	F	26	MUZAFFARPUR	BIHAR	26
284	10537	RAM	F	38	MOTIHARI	BIHAR	63.4
285	10538	RAM	F	13	MOTIHARI	BIHAR	60.7
286	10539	RAM	M	41	MOTIHARI	BIHAR	80.5
287	10540	RAM	M	37	MOTIHARI	BIHAR	78.7
288	10556	RAM	M	14	MUZAFFARPUR	BIHAR	74.9
289	10559	RAM	F	28	MUZAFFARPUR	BIHAR	63
290	10561	RAM	M	41	MUZAFFARPUR	BIHAR	64.7
291	10577	RAM	M	20	MUZAFFARPUR	BIHAR	56.6
292	10587	RAM	M	20	MUZAFFARPUR	BIHAR	52.2
293	10591	RAM	M	40	MUZAFFARPUR	BIHAR	62.3
294	10633	RAM	M	72	MUZAFFARPUR	BIHAR	61.5
295	10634	RAM	M	38	MUZAFFARPUR	BIHAR	55.45
296	10638	RAM	F	32	MUZAFFARPUR	BIHAR	61.4
297	10640	RAM	M	35	MUZAFFARPUR	BIHAR	53.7
298	5262	RAM	M	10	MUZAFFARPUR	BIHAR	61.65
299	5263	RAM	F	30	MUZAFFARPUR	BIHAR	46.5
300	5264	RAM	F	14	MUZAFFARPUR	BIHAR	56.05
301	5265	RAM	F	20	MUZAFFARPUR	BIHAR	61.3
302	5266	RAM	M	45	MUZAFFARPUR	BIHAR	60.05
303	5267	RAM	M	60	MUZAFFARPUR	BIHAR	53.2
304	5268	RAM	F	18	MUZAFFARPUR	BIHAR	78.8
305	6	RAM	F	18	MUZAFFARPUR	BIHAR	68
306	7	RAM	F	19	MUZAFFARPUR	BIHAR	60
307	8	RAM	M	50	MUZAFFARPUR	BIHAR	77
308	9	RAM	F	18	MUZAFFARPUR	BIHAR	56
309	10	RAM	F	20	MUZAFFARPUR	BIHAR	56
310	11	RAM	M	40	MUZAFFARPUR	BIHAR	60.5
311	12	RAM	F	65	MUZAFFARPUR	BIHAR	81
312	52	RAM	M	58	MUZAFFARPUR	BIHAR	76
313	53	RAM	F	60	MUZAFFARPUR	BIHAR	62

314	58	RAM	M	15	MUZAFFARPUR	BIHAR	65
315	80	RAM	M	12	MUZAFFARPUR	BIHAR	43
316	81	RAM	M	11	MUZAFFARPUR	BIHAR	63
317	82	RAM	M	13	MUZAFFARPUR	BIHAR	64
318	83	RAM	F	13	MUZAFFARPUR	BIHAR	63
319	84	RAM	F	18	MUZAFFARPUR	BIHAR	65
320	85	RAM	M	46	MUZAFFARPUR	BIHAR	61.5
321	86	RAM	F	18	MUZAFFARPUR	BIHAR	53
322	87	RAM	F	8	MUZAFFARPUR	BIHAR	71
323	88	RAM	F	10	MUZAFFARPUR	BIHAR	53
324	89	RAM	F	18	MUZAFFARPUR	BIHAR	79
325	119	RAM	M	12	MUZAFFARPUR	BIHAR	55.1
326	144	RAM	M	28	MUZAFFARPUR	BIHAR	60.45
327	159	RAM	M	28	MUZAFFARPUR	BIHAR	69.8
328	176	RAM	M	16	MUZAFFARPUR	BIHAR	50.25
329	10002	RAI	F	7	MUZAFFARPUR	BIHAR	65.8
330	10004	RAI	M	8	MUZAFFARPUR	BIHAR	53.6
331	10008	RAI	M	26	MUZAFFARPUR	BIHAR	51.35
332	10019	RAI	M	13	MUZAFFARPUR	BIHAR	49.75
333	10024	RAI	F	13	MUZAFFARPUR	BIHAR	63
334	10025	RAI	M	13	MUZAFFARPUR	BIHAR	62.7
335	10055	RAI	M	30	MUZAFFARPUR	BIHAR	51.1
336	10061	RAI	M	10	MUZAFFARPUR	BIHAR	65.3
337	10066	RAI	M	12	MUZAFFARPUR	BIHAR	46.7
338	10068	RAI	M	13	MUZAFFARPUR	BIHAR	68.3
339	10078	RAI	F	41	MUZAFFARPUR	BIHAR	60.1
340	10081	RAI	M	16	MUZAFFARPUR	BIHAR	65.7
341	10082	RAI	M	13	MUZAFFARPUR	BIHAR	70.7
342	10083	RAI	M	70	MUZAFFARPUR	BIHAR	71.5
343	10084	RAI	M	40	MUZAFFARPUR	BIHAR	72.2
344	10093	RAI	F	73	MUZAFFARPUR	BIHAR	54.6
345	10094	RAI	M	51	MUZAFFARPUR	BIHAR	69.6
346	10096	RAI	F	50	MUZAFFARPUR	BIHAR	56.6
347	10099	RAI	M	50	MUZAFFARPUR	BIHAR	61.3
348	10100	RAI	M	48	MUZAFFARPUR	BIHAR	56.9
349	10101	RAI	F	20	MUZAFFARPUR	BIHAR	67.3
350	10102	RAI	F	7	MUZAFFARPUR	BIHAR	65.7
351	10110	RAI	F	13	MUZAFFARPUR	BIHAR	61.3
352	10111	RAI	M	32	MUZAFFARPUR	BIHAR	55.7
353	10112	RAI	M	43	MUZAFFARPUR	BIHAR	54
354	10113	RAI	M	30	MUZAFFARPUR	BIHAR	67.5
355	10116	RAI	M	30	MUZAFFARPUR	BIHAR	72
356	10123	RAI	M	39	MUZAFFARPUR	BIHAR	57
357	10125	RAI	F	14	MUZAFFARPUR	BIHAR	58.7
358	10126	RAI	F	38	MUZAFFARPUR	BIHAR	74.5
359	10127	RAI	F	13	MUZAFFARPUR	BIHAR	68.7
360	10138	RAI	M	38	MUZAFFARPUR	BIHAR	64.9
361	10141	RAI	M	48	MUZAFFARPUR	BIHAR	47.9
362	10142	RAI	M	26	MUZAFFARPUR	BIHAR	61.3
363	10143	RAI	M	45	MUZAFFARPUR	BIHAR	55.4
364	10144	RAI	F	36	MUZAFFARPUR	BIHAR	73.1
365	10145	RAI	F	13	MUZAFFARPUR	BIHAR	57.8
366	10152	RAI	M	36	MUZAFFARPUR	BIHAR	55.2
367	10153	RAI	F	53	MUZAFFARPUR	BIHAR	57.3
368	10179	RAI	M	34	MUZAFFARPUR	BIHAR	69.9
369	10216	RAI	M	36	MUZAFFARPUR	BIHAR	47
370	10217	RAI	M	48	MUZAFFARPUR	BIHAR	56
371	10218	RAI	M	35	MUZAFFARPUR	BIHAR	50
372	10219	RAI	F	31	MUZAFFARPUR	BIHAR	59
373	10220	RAI	F	30	MUZAFFARPUR	BIHAR	70
374	10224	RAI	M	12	MUZAFFARPUR	BIHAR	54
375	10225	RAI	M	43	MUZAFFARPUR	BIHAR	64
376	10239	RAI	M	37	MUZAFFARPUR	BIHAR	54
377	10298	RAI	M	7	MUZAFFARPUR	BIHAR	52
378	10339	RAI	M	37	MUZAFFARPUR	BIHAR	57
379	10346	RAI	M	54	MUZAFFARPUR	BIHAR	62
380	10363	RAI	M	45	MUZAFFARPUR	BIHAR	41.15
381	10364	RAI	M	63	MUZAFFARPUR	BIHAR	73.15
382	10367	RAI	M	8	MUZAFFARPUR	BIHAR	58.8
383	10371	RAI	M	23	MUZAFFARPUR	BIHAR	55.9
384	10372	RAI	M	58	MUZAFFARPUR	BIHAR	69
385	10373	RAI	M	34	MUZAFFARPUR	BIHAR	74.1
386	10374	RAI	M	35	MUZAFFARPUR	BIHAR	58.7
387	10375	RAI	M	63	MUZAFFARPUR	BIHAR	66.7
388	10376	RAI	M	46	MUZAFFARPUR	BIHAR	74.7
389	10377	RAI	F	39	MUZAFFARPUR	BIHAR	54.3
390	10378	RAI	F	11	MUZAFFARPUR	BIHAR	61.7
391	10385	RAI	F	58	MUZAFFARPUR	BIHAR	53.05
392	10395	RAI	M	22	MUZAFFARPUR	BIHAR	52.1

393	10397	RAI	M	23	MUZAFFARPUR	BIHAR	59.3
394	10398	RAI	M	42	MUZAFFARPUR	BIHAR	61.4
395	10399	RAI	F	5	MUZAFFARPUR	BIHAR	45.2
396	10400	RAI	M	26	MUZAFFARPUR	BIHAR	55.3
397	10407	RAI	F	33	MUZAFFARPUR	BIHAR	52.8
398	10408	RAI	F	31	MUZAFFARPUR	BIHAR	62.8
399	10409	RAI	F	20	MUZAFFARPUR	BIHAR	64.15
400	10411	RAI	M	41	MUZAFFARPUR	BIHAR	63.85
401	10413	RAI	F	39	MUZAFFARPUR	BIHAR	66.25
402	10414	RAI	F	36	MUZAFFARPUR	BIHAR	58.15
403	10431	RAI	M	30	MUZAFFARPUR	BIHAR	56.6
404	10437	RAI	F	41	MOTIHARI	BIHAR	57
405	10438	RAI	M	43	MOTIHARI	BIHAR	75
406	10440	RAI	F	47	MOTIHARI	BIHAR	63
407	10445	RAI	F	19	MOTIHARI	BIHAR	53.4
408	10448	RAI	M	37	MOTIHARI	BIHAR	72.7
409	10449	RAI	M	43	MOTIHARI	BIHAR	79.1
410	10455	RAI	M	8	MUZAFFARPUR	BIHAR	51.2
411	10463	RAI	M	14	MUZAFFARPUR	BIHAR	57.95
412	10467	RAI	M	12	MUZAFFARPUR	BIHAR	61
413	10468	RAI	F	11	MUZAFFARPUR	BIHAR	57
414	10478	RAI	M	62	MUZAFFARPUR	BIHAR	71.2
415	10479	RAI	M	24	MUZAFFARPUR	BIHAR	62.8
416	10480	RAI	M	50	MUZAFFARPUR	BIHAR	60.2
417	10507	RAI	M	24	MUZAFFARPUR	BIHAR	61
418	10513	RAI	M	56	MOTIHARI	BIHAR	46.9
419	10522	RAI	M	39	MOTIHARI	BIHAR	64.5
420	10529	RAI	M	50	MOTIHARI	BIHAR	66.9
421	10530	RAI	M	54	MUZAFFARPUR	BIHAR	76.8
422	10531	RAI	M	53	MUZAFFARPUR	BIHAR	65.2
423	10532	RAI	F	49	MUZAFFARPUR	BIHAR	75.8
424	10533	RAI	F	28	MUZAFFARPUR	BIHAR	61.3
425	10534	RAI	F	30	MUZAFFARPUR	BIHAR	63.3
426	10535	RAI	M	52	MUZAFFARPUR	BIHAR	53.9
427	10545	RAI	F	20	MUZAFFARPUR	BIHAR	54.4
428	10554	RAI	M	42	MUZAFFARPUR	BIHAR	52.8
429	10555	RAI	M	28	MUZAFFARPUR	BIHAR	55.1
430	10566	RAI	M	49	MOTIHARI	BIHAR	61.7
431	10567	RAI	F	42	MOTIHARI	BIHAR	68.1
432	10596	RAI	M	20	MUZAFFARPUR	BIHAR	58.4
433	10639	RAI	M	60	MUZAFFARPUR	BIHAR	61.6
434	10653	RAI	M	40	MUZAFFARPUR	BIHAR	64.85
435	10655	RAI	F	65	MUZAFFARPUR	BIHAR	69.3
436	5279	RAI	M	8	MUZAFFARPUR	BIHAR	66.85
437	5281	RAI	F	26	MUZAFFARPUR	BIHAR	50.85
438	5282	RAI	M	32	MUZAFFARPUR	BIHAR	55.1
439	5298	RAI	F	16	MUZAFFARPUR	BIHAR	59.15
440	5299	RAI	F	49	MUZAFFARPUR	BIHAR	59.45
441	5301	RAI	M	14	MUZAFFARPUR	BIHAR	65.65
442	34	RAI	M	56	MUZAFFARPUR	BIHAR	70
443	68	RAI	M	58	MUZAFFARPUR	BIHAR	59
444	70	RAI	M	26	MUZAFFARPUR	BIHAR	65
445	79	RAI	M	23	MUZAFFARPUR	BIHAR	49
446	90	RAI	F	40	MUZAFFARPUR	BIHAR	54
447	121	RAI	M	50	MUZAFFARPUR	BIHAR	24
448	123	RAI	M	20	MUZAFFARPUR	BIHAR	54.5
449	152	RAI	M	50	MUZAFFARPUR	BIHAR	46.5
450	182-70	RAI	M	26	MUZAFFARPUR	BIHAR	64
451	10855	PRASAD	M	40	PATNA	BIHAR	57.4
452	10214	PRASAD	F	40	MUZAFFARPUR	BIHAR	64.9
453	10508	PRASAD	M	40	MUZAFFARPUR	BIHAR	62
454	10572	PRASAD	M	56	MUZAFFARPUR	BIHAR	44.15
455	10787	PRASAD	M	45	PATNA	BIHAR	50.9
456	10825	PRASAD	F	55	PATNA	BIHAR	53.35
457	10828	PRASAD	M	40	PATNA	BIHAR	65.65
458	10831	PRASAD	F	17	NALANDA	BIHAR	63.8
459	10832	PRASAD	F	24	PATNA	BIHAR	54.6
460	10885	PRASAD	M	17	PATNA	BIHAR	56.35
461	10887	PRASAD	M	14	PATNA	BIHAR	52.65
462	35	PRASAD	F	50	MUZAFFARPUR	BIHAR	81
463	37	PRASAD	M	28	MUZAFFARPUR	BIHAR	59
464	40	PRASAD	F	60	MUZAFFARPUR	BIHAR	42
465	44	PRASAD	F	26	MUZAFFARPUR	BIHAR	48
466	95	PRASAD	F	38	MUZAFFARPUR	BIHAR	63
467	10022	PASWAN	M	14	MUZAFFARPUR	BIHAR	56.4
468	10030	PASWAN	M	5	MUZAFFARPUR	BIHAR	54.1
469	10139	PASWAN	M	13	MUZAFFARPUR	BIHAR	58.6
470	10175	PASWAN	M	50	MUZAFFARPUR	BIHAR	78.5
471	10177	PASWAN	M	31	MUZAFFARPUR	BIHAR	53.7

472	10190	PASWAN	M	53	MUZAFFARPUR	BIHAR	56.1
473	10221	PASWAN	M	50	MUZAFFARPUR	BIHAR	60
474	10222	PASWAN	F	7	MUZAFFARPUR	BIHAR	64
475	10231	PASWAN	F	28	MUZAFFARPUR	BIHAR	57
476	10232	PASWAN	M	13	MUZAFFARPUR	BIHAR	74
477	10233	PASWAN	M	38	MUZAFFARPUR	BIHAR	56
478	10234	PASWAN	F	33	MUZAFFARPUR	BIHAR	57
479	10235	PASWAN	M	9	MUZAFFARPUR	BIHAR	56
480	10241	PASWAN	M	39	MUZAFFARPUR	BIHAR	79
481	10244	PASWAN	M	8	MUZAFFARPUR	BIHAR	54
482	10245	PASWAN	F	14	MUZAFFARPUR	BIHAR	70
483	10246	PASWAN	M	63	MUZAFFARPUR	BIHAR	60
484	10252	PASWAN	M	35	MUZAFFARPUR	BIHAR	65
485	10255	PASWAN	M	33	MUZAFFARPUR	BIHAR	37
486	10256	PASWAN	F	37	MUZAFFARPUR	BIHAR	62
487	10257	PASWAN	M	11	MUZAFFARPUR	BIHAR	57
488	10284	PASWAN	M	14	MUZAFFARPUR	BIHAR	60
489	10285	PASWAN	M	20	MUZAFFARPUR	BIHAR	62
490	10287	PASWAN	M	14	MUZAFFARPUR	BIHAR	52
491	10288	PASWAN	M	35	MUZAFFARPUR	BIHAR	77
492	10292	PASWAN	F	23	MUZAFFARPUR	BIHAR	66.7
493	10294	PASWAN	M	11	MUZAFFARPUR	BIHAR	69.2
494	10307	PASWAN	M	40	MUZAFFARPUR	BIHAR	72
495	10314	PASWAN	M	37	MUZAFFARPUR	BIHAR	73
496	10317	PASWAN	M	30	MUZAFFARPUR	BIHAR	65
497	10326	PASWAN	M	60	MUZAFFARPUR	BIHAR	64
498	10327	PASWAN	M	26	MUZAFFARPUR	BIHAR	62
499	10335	PASWAN	M	39	MUZAFFARPUR	BIHAR	60
500	10336	PASWAN	M	38	MUZAFFARPUR	BIHAR	50
501	10341	PASWAN	M	57	MUZAFFARPUR	BIHAR	60
502	10344	PASWAN	F	49	MUZAFFARPUR	BIHAR	78
503	10347	PASWAN	M	32	MUZAFFARPUR	BIHAR	66
504	10362	PASWAN	M	43	MOTIHARI	BIHAR	76
505	10430	PASWAN	M	47	MUZAFFARPUR	BIHAR	57.5
506	10453	PASWAN	M	29	MOTIHARI	BIHAR	68.8
507	10482	PASWAN	F	10	MUZAFFARPUR	BIHAR	56.2
508	10483	PASWAN	M	46	MUZAFFARPUR	BIHAR	90.4
509	10493	PASWAN	M	43	MUZAFFARPUR	BIHAR	60
510	10494	PASWAN	F	47	MUZAFFARPUR	BIHAR	55
511	10495	PASWAN	M	52	MUZAFFARPUR	BIHAR	55
512	10496	PASWAN	M	25	MUZAFFARPUR	BIHAR	66.9
513	10497	PASWAN	M	55	MUZAFFARPUR	BIHAR	80.7
514	10501	PASWAN	M	37	MUZAFFARPUR	BIHAR	55
515	10509	PASWAN	F	30	MUZAFFARPUR	BIHAR	62
516	10510	PASWAN	F	39	MUZAFFARPUR	BIHAR	62
517	10519	PASWAN	M	36	MOTIHARI	BIHAR	67.3
518	10527	PASWAN	F	36	MOTIHARI	BIHAR	59
519	10546	PASWAN	M	42	MUZAFFARPUR	BIHAR	72.4
520	10547	PASWAN	F	38	MUZAFFARPUR	BIHAR	65.7
521	10548	PASWAN	M	61	MUZAFFARPUR	BIHAR	50.2
522	10551	PASWAN	M	26	MUZAFFARPUR	BIHAR	58.8
523	10552	PASWAN	F	36	MUZAFFARPUR	BIHAR	52.8
524	10563	PASWAN	F	18	MUZAFFARPUR	BIHAR	74.2
525	10564	PASWAN	F	18	MUZAFFARPUR	BIHAR	66.3
526	10565	PASWAN	M	54	MUZAFFARPUR	BIHAR	69.4
527	10600	PASWAN	F	53	MUZAFFARPUR	BIHAR	49.7
528	10646	PASWAN	M	35	MUZAFFARPUR	BIHAR	49.3
529	10648	PASWAN	F	41	MUZAFFARPUR	BIHAR	61.85
530	10649	PASWAN	M	55	MUZAFFARPUR	BIHAR	70.35
531	10656	PASWAN	M	42	MUZAFFARPUR	BIHAR	60.95
532	10657	PASWAN	F	54	MUZAFFARPUR	BIHAR	59.45
533	10658	PASWAN	M	42	MUZAFFARPUR	BIHAR	62.15
534	10672	PASWAN	M	55	MUZAFFARPUR	BIHAR	76.1
535	10862	PASWAN	F	7	VAISHALI	BIHAR	66.4
536	10865	PASWAN	F	30	VAISHALI	BIHAR	54
537	10891	PASWAN	F	60	PATNA	BIHAR	51.95
538	10906	PASWAN	F	38	MUZAFFARPUR	BIHAR	64.5
539	10907	PASWAN	F	40	MUZAFFARPUR	BIHAR	77.4
540	10912	PASWAN	M	8	MUZAFFARPUR	BIHAR	65.65
541	10913	PASWAN	M	45	MUZAFFARPUR	BIHAR	57
542	10919	PASWAN	F	29	MUZAFFARPUR	BIHAR	49.65
543	10937	PASWAN	M	32	MUZAFFARPUR	BIHAR	75.75
544	10938	PASWAN	F	40	MUZAFFARPUR	BIHAR	62.5
545	10940	PASWAN	M	9	MUZAFFARPUR	BIHAR	67.7
546	10941	PASWAN	F	14	MUZAFFARPUR	BIHAR	58.9
547	10942	PASWAN	F	46	MUZAFFARPUR	BIHAR	70
548	10985	PASWAN	M	47	MUZAFFARPUR	BIHAR	53.65
549	5289	PASWAN	M	45	MUZAFFARPUR	BIHAR	73.7
550	5290	PASWAN	M	18	MUZAFFARPUR	BIHAR	56.1

551	5291	PASWAN	M	55	MUZAFFARPUR	BIHAR	50.2
552	5293	PASWAN	M	52	MUZAFFARPUR	BIHAR	70.3
553	5294	PASWAN	M	48	MUZAFFARPUR	BIHAR	64.65
554	5296	PASWAN	F	28	MUZAFFARPUR	BIHAR	57.1
555	5297	PASWAN	M	30	MUZAFFARPUR	BIHAR	68.4
556	5305	PASWAN	F	40	MUZAFFARPUR	BIHAR	58.7
557	3	PASWAN	M	58	MUZAFFARPUR	BIHAR	78
558	5	PASWAN	F	42	MUZAFFARPUR	BIHAR	79
559	21	PASWAN	F	42	MUZAFFARPUR	BIHAR	80
560	23	PASWAN	F	46	MUZAFFARPUR	BIHAR	79.5
561	54	PASWAN	M	40	MUZAFFARPUR	BIHAR	56
562	55	PASWAN	F	43	MUZAFFARPUR	BIHAR	77
563	56	PASWAN	M	10	MUZAFFARPUR	BIHAR	45
564	57	PASWAN	M	15	MUZAFFARPUR	BIHAR	69
565	59	PASWAN	F	18	MUZAFFARPUR	BIHAR	57
566	60	PASWAN	F	26	MUZAFFARPUR	BIHAR	63
567	61	PASWAN	F	8	MUZAFFARPUR	BIHAR	71
568	62	PASWAN	F	60	MUZAFFARPUR	BIHAR	62
569	130	PASWAN	F	30	MUZAFFARPUR	BIHAR	85.6
570	132	PASWAN	M	60	MUZAFFARPUR	BIHAR	54.25
571	133	PASWAN	F	16	MUZAFFARPUR	BIHAR	64
572	134	PASWAN	F	16	MUZAFFARPUR	BIHAR	63.9
573	136	PASWAN	M	18	MUZAFFARPUR	BIHAR	60.9
574	137	PASWAN	M	11	MUZAFFARPUR	BIHAR	89.7
575	138	PASWAN	F	11	MUZAFFARPUR	BIHAR	78.2
576	139	PASWAN	M	19	MUZAFFARPUR	BIHAR	57.5
577	140	PASWAN	M	14	MUZAFFARPUR	BIHAR	55
578	143	PASWAN	F	10	MUZAFFARPUR	BIHAR	59.95
579	145	PASWAN	M	38	MUZAFFARPUR	BIHAR	61.75
580	146	PASWAN	M	28	MUZAFFARPUR	BIHAR	85.25
581	151	PASWAN	F	36	MUZAFFARPUR	BIHAR	60.8
582	153	PASWAN	M	42	MUZAFFARPUR	BIHAR	52
583	10016	PANDIT	M	12	MUZAFFARPUR	BIHAR	49.35
584	10140	PANDIT	M	26	MUZAFFARPUR	BIHAR	72.6
585	10323	PANDIT	M	52	MUZAFFARPUR	BIHAR	67
586	10324	PANDIT	F	12	MUZAFFARPUR	BIHAR	58
587	10325	PANDIT	F	55	MUZAFFARPUR	BIHAR	80
588	10337	PANDIT	M	35	MUZAFFARPUR	BIHAR	58
589	10406	PANDIT	M	52	MUZAFFARPUR	BIHAR	60.2
590	10568	PANDIT	M	61	MOTIHARI	BIHAR	65
591	10604	PANDIT	F	68	MUZAFFARPUR	BIHAR	65.6
592	5284	PANDIT	M	43	MUZAFFARPUR	BIHAR	62.05
593	5285	PANDIT	F	18	MUZAFFARPUR	BIHAR	65.75
594	46	PANDIT	F	39	MUZAFFARPUR	BIHAR	77.5
595	10003	MUSLIM	F	9	MUZAFFARPUR	BIHAR	50.15
596	10018	MUSLIM	F	13	MUZAFFARPUR	BIHAR	56.6
597	10021	MUSLIM	M	47	MUZAFFARPUR	BIHAR	56.6
598	10028	MUSLIM	F	8	MUZAFFARPUR	BIHAR	56.85
599	10034	MUSLIM	M	50	MUZAFFARPUR	BIHAR	65.2
600	10035	MUSLIM	M	12	MUZAFFARPUR	BIHAR	54.4
601	10037	MUSLIM	M	42	MUZAFFARPUR	BIHAR	70.95
602	10038	MUSLIM	M	21	MOTIHARI	BIHAR	61.6
603	10041	MUSLIM	M	56	MUZAFFARPUR	BIHAR	45.95
604	10050	MUSLIM	M	8	MUZAFFARPUR	BIHAR	52.1
605	10053	MUSLIM	M	18	MUZAFFARPUR	BIHAR	56
606	10065	MUSLIM	M	14	MUZAFFARPUR	BIHAR	58.95
607	10071	MUSLIM	F	13	MUZAFFARPUR	BIHAR	64
608	10154	MUSLIM	M	60	MUZAFFARPUR	BIHAR	63
609	10180	MUSLIM	F	16	MUZAFFARPUR	BIHAR	63.6
610	10185	MUSLIM	M	48	MUZAFFARPUR	BIHAR	54.9
611	10186	MUSLIM	F	61	MUZAFFARPUR	BIHAR	59.2
612	10187	MUSLIM	M	11	MUZAFFARPUR	BIHAR	66
613	10188	MUSLIM	F	46	MUZAFFARPUR	BIHAR	61.5
614	10189	MUSLIM	M	14	MUZAFFARPUR	BIHAR	61.8
615	10191	MUSLIM	M	13	MUZAFFARPUR	BIHAR	38.4
616	10192	MUSLIM	F	16	MUZAFFARPUR	BIHAR	52.1
617	10193	MUSLIM	F	36	MUZAFFARPUR	BIHAR	66
618	10194	MUSLIM	F	37	MUZAFFARPUR	BIHAR	63.6
619	10195	MUSLIM	M	38	MUZAFFARPUR	BIHAR	60.1
620	10196	MUSLIM	M	41	MUZAFFARPUR	BIHAR	61.5
621	10251	MUSLIM	M	7	MUZAFFARPUR	BIHAR	57
622	10303	MUSLIM	M	35	MUZAFFARPUR	BIHAR	76
623	10304	MUSLIM	M	36	MUZAFFARPUR	BIHAR	55
624	10305	MUSLIM	F	57	MUZAFFARPUR	BIHAR	65
625	10306	MUSLIM	M	56	MUZAFFARPUR	BIHAR	60
626	10311	MUSLIM	M	24	MUZAFFARPUR	BIHAR	59
627	10312	MUSLIM	F	60	MUZAFFARPUR	BIHAR	60
628	10313	MUSLIM	F	58	MUZAFFARPUR	BIHAR	62
629	10315	MUSLIM	M	43	MUZAFFARPUR	BIHAR	63

630	10331	MUSLIM	F	35	MUZAFFARPUR	BIHAR	67
631	10342	MUSLIM	F	9	MUZAFFARPUR	BIHAR	75
632	10343	MUSLIM	M	7	MUZAFFARPUR	BIHAR	65
633	10345	MUSLIM	F	39	MUZAFFARPUR	BIHAR	67
634	10354	MUSLIM	F	12	MUZAFFARPUR	BIHAR	49.85
635	10365	MUSLIM	M	9	MUZAFFARPUR	BIHAR	55.8
636	10366	MUSLIM	F	24	MUZAFFARPUR	BIHAR	49.3
637	10410	MUSLIM	F	38	MUZAFFARPUR	BIHAR	73.35
638	10412	MUSLIM	F	39	MUZAFFARPUR	BIHAR	63.15
639	10450	MUSLIM	M	65	MOTIHARI	BIHAR	64.1
640	10452	MUSLIM	M	18	MOTIHARI	BIHAR	72.3
641	10469	MUSLIM	M	50	MUZAFFARPUR	BIHAR	66.7
642	10470	MUSLIM	F	16	MUZAFFARPUR	BIHAR	63.8
643	10471	MUSLIM	F	19	MUZAFFARPUR	BIHAR	59.3
644	10472	MUSLIM	F	18	MUZAFFARPUR	BIHAR	68.7
645	10473	MUSLIM	F	15	MUZAFFARPUR	BIHAR	48.8
646	10474	MUSLIM	M	26	MUZAFFARPUR	BIHAR	57.7
647	10492	MUSLIM	M	19	MUZAFFARPUR	BIHAR	57.4
648	10500	MUSLIM	M	50	MUZAFFARPUR	BIHAR	60.7
649	10521	MUSLIM	M	38	MOTIHARI	BIHAR	51.8
650	10578	MUSLIM	M	30	MUZAFFARPUR	BIHAR	62.6
651	10583	MUSLIM	M	38	MUZAFFARPUR	BIHAR	46.3
652	10790	MUSLIM	M	55	PATNA	BIHAR	52.95
653	10844	MUSLIM	M	55	PATNA	BIHAR	65.3
654	10846	MUSLIM	F	30	PATNA	BIHAR	50.8
655	10851	MUSLIM	M	20	PATNA	BIHAR	42.5
656	10879	MUSLIM	M	45	ALLAHABAD	UTTAR PRADESH	36.25
657	10883	MUSLIM	M	35	ALLAHABAD	UTTAR PRADESH	41.45
658	10893	MUSLIM	M	13	PATNA	BIHAR	43.6
659	10900	MUSLIM	M	40	MOTIHARI	BIHAR	67.3
660	10926	MUSLIM	M	35	MUZAFFARPUR	BIHAR	59.45
661	10960	MUSLIM	M	14	MUZAFFARPUR	BIHAR	48.55
662	10967	MUSLIM	M	30	MIRZAPUR	UTTAR PRADESH	42.95
663	27	MUSLIM	F	26	MUZAFFARPUR	BIHAR	63
664	31	MUSLIM	M	27	MUZAFFARPUR	BIHAR	55
665	38	MUSLIM	M	46	MUZAFFARPUR	BIHAR	49
666	91	MUSLIM	M	14	MUZAFFARPUR	BIHAR	64
667	93	MUSLIM	M	60	MUZAFFARPUR	BIHAR	67
668	98	MUSLIM	M	43	MUZAFFARPUR	BIHAR	54
669	102	MUSLIM	M	13	MUZAFFARPUR	BIHAR	72
670	124	MUSLIM	M	32	MUZAFFARPUR	BIHAR	60.2
671	125	MUSLIM	F	28	MUZAFFARPUR	BIHAR	49.4
672	157	MUSLIM	M	19	MUZAFFARPUR	BIHAR	54.4
673	158	MUSLIM	F	30	MUZAFFARPUR	BIHAR	64.5
674	162	MUSLIM	F	20	MUZAFFARPUR	BIHAR	59.6
675	164	MUSLIM	M	24	MUZAFFARPUR	BIHAR	53
676	165	MUSLIM	M	24	MUZAFFARPUR	BIHAR	52
677	10020	MANJHI	M	13	MUZAFFARPUR	BIHAR	64.8
678	10032	MANJHI	F	13	MUZAFFARPUR	BIHAR	64.85
679	10052	MANJHI	M	28	MUZAFFARPUR	BIHAR	74.6
680	10105	MANJHI	M	29	MUZAFFARPUR	BIHAR	70.5
681	10106	MANJHI	M	6	MUZAFFARPUR	BIHAR	81.6
682	10107	MANJHI	M	13	MUZAFFARPUR	BIHAR	81.6
683	10108	MANJHI	M	11	MUZAFFARPUR	BIHAR	64.8
684	10109	MANJHI	F	50	MUZAFFARPUR	BIHAR	63.6
685	10135	MANJHI	M	34	MUZAFFARPUR	BIHAR	73.8
686	10136	MANJHI	F	30	MUZAFFARPUR	BIHAR	73.4
687	10137	MANJHI	M	36	MUZAFFARPUR	BIHAR	72
688	10155	MANJHI	M	19	MUZAFFARPUR	BIHAR	73
689	10156	MANJHI	M	63	MUZAFFARPUR	BIHAR	66.5
690	10157	MANJHI	M	32	MUZAFFARPUR	BIHAR	79.4
691	10282	MANJHI	M	43	MUZAFFARPUR	BIHAR	68
692	10283	MANJHI	M	30	MUZAFFARPUR	BIHAR	65
693	10286	MANJHI	M	23	MUZAFFARPUR	BIHAR	69
694	10289	MANJHI	F	15	MUZAFFARPUR	BIHAR	77
695	10290	MANJHI	F	13	MUZAFFARPUR	BIHAR	70
696	10293	MANJHI	M	29	MUZAFFARPUR	BIHAR	86.4
697	10350	MANJHI	M	27	MUZAFFARPUR	BIHAR	59
698	10355	MANJHI	F	10	MUZAFFARPUR	BIHAR	60.5
699	10357	MANJHI	F	23	MUZAFFARPUR	BIHAR	75.5
700	10359	MANJHI	M	43	MUZAFFARPUR	BIHAR	55.6
701	10401	MANJHI	M	11	MUZAFFARPUR	BIHAR	69.3
702	10402	MANJHI	F	29	MUZAFFARPUR	BIHAR	61.5
703	10403	MANJHI	F	9	MUZAFFARPUR	BIHAR	62.9
704	10404	MANJHI	F	13	MUZAFFARPUR	BIHAR	64.7
705	10405	MANJHI	F	15	MUZAFFARPUR	BIHAR	72.9
706	10419	MANJHI	F	33	MUZAFFARPUR	BIHAR	80.9
707	10420	MANJHI	M	26	MUZAFFARPUR	BIHAR	77.7
708	10421	MANJHI	M	41	MUZAFFARPUR	BIHAR	65.4

709	10422	MANJHI	F	15	MUZAFFARPUR	BIHAR	80.2
710	10423	MANJHI	M	19	MUZAFFARPUR	BIHAR	53.2
711	10424	MANJHI	M	60	MUZAFFARPUR	BIHAR	75.5
712	10439	MANJHI	M	61	MOTIHARI	BIHAR	65.4
713	10466	MANJHI	F	14	MUZAFFARPUR	BIHAR	61.55
714	10477	MANJHI	M	31	MUZAFFARPUR	BIHAR	71.3
715	10481	MANJHI	M	33	MUZAFFARPUR	BIHAR	79.7
716	10484	MANJHI	M	20	MUZAFFARPUR	BIHAR	72.2
717	10485	MANJHI	F	19	MUZAFFARPUR	BIHAR	71.6
718	10486	MANJHI	M	20	MUZAFFARPUR	BIHAR	73.2
719	10488	MANJHI	F	52	MUZAFFARPUR	BIHAR	62.8
720	10544	MANJHI	M	22	MUZAFFARPUR	BIHAR	66.2
721	10553	MANJHI	F	33	MUZAFFARPUR	BIHAR	71.7
722	10557	MANJHI	M	38	MUZAFFARPUR	BIHAR	89.3
723	10558	MANJHI	F	28	MUZAFFARPUR	BIHAR	63.2
724	10641	MANJHI	M	40	MUZAFFARPUR	BIHAR	78
725	10642	MANJHI	M	26	MUZAFFARPUR	BIHAR	58.7
726	10643	MANJHI	M	52	MUZAFFARPUR	BIHAR	69.45
727	10644	MANJHI	M	19	MUZAFFARPUR	BIHAR	76.2
728	10645	MANJHI	M	62	MOTIHARI	BIHAR	82.15
729	10843	MANJHI	M	17	PATNA	BIHAR	77.5
730	10892	MANJHI	M	50	PATNA	BIHAR	63
731	10924	MANJHI	M	46	MUZAFFARPUR	BIHAR	67.65
732	10925	MANJHI	F	26	MUZAFFARPUR	BIHAR	56.45
733	10927	MANJHI	F	19	MUZAFFARPUR	BIHAR	74.65
734	10928	MANJHI	M	38	MUZAFFARPUR	BIHAR	73.35
735	10929	MANJHI	F	43	MUZAFFARPUR	BIHAR	80.3
736	10930	MANJHI	M	36	MUZAFFARPUR	BIHAR	61.6
737	10931	MANJHI	F	42	MUZAFFARPUR	BIHAR	65
738	13	MANJHI	M	18	MUZAFFARPUR	BIHAR	75.5
739	14	MANJHI	M	26	MUZAFFARPUR	BIHAR	78.5
740	15	MANJHI	F	40	MUZAFFARPUR	BIHAR	76.5
741	16	MANJHI	M	26	MUZAFFARPUR	BIHAR	78.5
742	17	MANJHI	F	32	MUZAFFARPUR	BIHAR	78.95
743	18	MANJHI	F	8	MUZAFFARPUR	BIHAR	81.5
744	19	MANJHI	M	18	MUZAFFARPUR	BIHAR	80
745	20	MANJHI	F	22	MUZAFFARPUR	BIHAR	73.5
746	22	MANJHI	F	28	MUZAFFARPUR	BIHAR	78
747	148	MANJHI	F	11	MUZAFFARPUR	BIHAR	59.7
748	181-149	MANJHI	M	18	MUZAFFARPUR	BIHAR	52.6
749	10005	MAHTO	M	10	MUZAFFARPUR	BIHAR	78.55
750	10006	MAHTO	M	32	MUZAFFARPUR	BIHAR	80.55
751	10033	MAHTO	M	51	MUZAFFARPUR	BIHAR	55.2
752	10036	MAHTO	M	46	MUZAFFARPUR	BIHAR	51.65
753	10039	MAHTO	M	21	MUZAFFARPUR	BIHAR	58.1
754	10040	MAHTO	F	40	MUZAFFARPUR	BIHAR	66.25
755	10043	MAHTO	M	30	MOTIHARI	BIHAR	74.55
756	10044	MAHTO	M	50	MOTIHARI	BIHAR	75.05
757	10058	MAHTO	F	52	MUZAFFARPUR	BIHAR	70
758	10060	MAHTO	M	30	MUZAFFARPUR	BIHAR	65.3
759	10062	MAHTO	M	18	MUZAFFARPUR	BIHAR	56.2
760	10069	MAHTO	M	52	MUZAFFARPUR	BIHAR	60.1
761	10122	MAHTO	M	49	MUZAFFARPUR	BIHAR	67.4
762	10159	MAHTO	M	47	MUZAFFARPUR	BIHAR	82.2
763	10160	MAHTO	F	50	MUZAFFARPUR	BIHAR	70.4
764	10161	MAHTO	M	13	MUZAFFARPUR	BIHAR	74.4
765	10162	MAHTO	M	8	MUZAFFARPUR	BIHAR	73.8
766	10163	MAHTO	F	54	MUZAFFARPUR	BIHAR	82.2
767	10173	MAHTO	M	33	MUZAFFARPUR	BIHAR	72.3
768	10200	MAHTO	F	14	VAISHALI	BIHAR	73.2
769	10201	MAHTO	F	19	VAISHALI	BIHAR	60.9
770	10209	MAHTO	M	56	VAISHALI	BIHAR	65.1
771	10211	MAHTO	M	56	VAISHALI	BIHAR	75.7
772	10238	MAHTO	F	9	MUZAFFARPUR	BIHAR	76
773	10242	MAHTO	M	37	MUZAFFARPUR	BIHAR	54
774	10258	MAHTO	F	56	MUZAFFARPUR	BIHAR	55
775	10259	MAHTO	F	9	MUZAFFARPUR	BIHAR	55
776	10260	MAHTO	F	7	MUZAFFARPUR	BIHAR	51
777	10261	MAHTO	M	19	MUZAFFARPUR	BIHAR	62
778	10262	MAHTO	M	58	MUZAFFARPUR	BIHAR	67
779	10263	MAHTO	M	34	MUZAFFARPUR	BIHAR	58
780	10264	MAHTO	M	38	MUZAFFARPUR	BIHAR	61
781	10265	MAHTO	M	37	MUZAFFARPUR	BIHAR	52
782	10266	MAHTO	F	14	MUZAFFARPUR	BIHAR	60.9
783	10269	MAHTO	M	15	MUZAFFARPUR	BIHAR	64
784	10270	MAHTO	F	14	MUZAFFARPUR	BIHAR	56
785	10271	MAHTO	M	42	MUZAFFARPUR	BIHAR	66
786	10272	MAHTO	M	15	MUZAFFARPUR	BIHAR	64
787	10273	MAHTO	M	9	MUZAFFARPUR	BIHAR	68

788	10274	MAHTO	M	53	MUZAFFARPUR	BIHAR	59
789	10275	MAHTO	F	40	MUZAFFARPUR	BIHAR	68
790	10276	MAHTO	F	25	MUZAFFARPUR	BIHAR	64
791	10277	MAHTO	M	15	MUZAFFARPUR	BIHAR	64
792	10278	MAHTO	M	30	MUZAFFARPUR	BIHAR	68.15
793	10279	MAHTO	F	5	MUZAFFARPUR	BIHAR	70
794	10280	MAHTO	F	14	MUZAFFARPUR	BIHAR	23
795	10281	MAHTO	F	11	MUZAFFARPUR	BIHAR	64
796	10320	MAHTO	F	39	MUZAFFARPUR	BIHAR	54.4
797	10328	MAHTO	M	65	MUZAFFARPUR	BIHAR	70
798	10329	MAHTO	F	63	MUZAFFARPUR	BIHAR	80
799	10330	MAHTO	F	61	MUZAFFARPUR	BIHAR	65
800	10332	MAHTO	M	43	MUZAFFARPUR	BIHAR	61
801	10333	MAHTO	M	46	MUZAFFARPUR	BIHAR	72
802	10358	MAHTO	M	39	MUZAFFARPUR	BIHAR	60.9
803	10368	MAHTO	F	19	MUZAFFARPUR	BIHAR	52
804	10369	MAHTO	M	19	MUZAFFARPUR	BIHAR	55.8
805	10390	MAHTO	M	12	MUZAFFARPUR	BIHAR	61.1
806	10391	MAHTO	F	26	MUZAFFARPUR	BIHAR	64.5
807	10394	MAHTO	M	10	MUZAFFARPUR	BIHAR	58.9
808	10433	MAHTO	M	28	MUZAFFARPUR	BIHAR	82.7
809	10434	MAHTO	M	60	MUZAFFARPUR	BIHAR	67.1
810	10435	MAHTO	M	40	MUZAFFARPUR	BIHAR	86.6
811	10436	MAHTO	M	9	MUZAFFARPUR	BIHAR	61
812	10454	MAHTO	F	26	MUZAFFARPUR	BIHAR	76.2
813	10458	MAHTO	M	9	MUZAFFARPUR	BIHAR	59.1
814	10503	MAHTO	M	32	VAISHALI	BIHAR	72.6
815	10505	MAHTO	M	30	VAISHALI	BIHAR	65.7
816	10506	MAHTO	M	46	VAISHALI	BIHAR	68.3
817	10580	MAHTO	M	32	MUZAFFARPUR	BIHAR	54.9
818	10582	MAHTO	M	40	MUZAFFARPUR	BIHAR	56.25
819	10584	MAHTO	M	37	MUZAFFARPUR	BIHAR	56.95
820	10585	MAHTO	M	65	MUZAFFARPUR	BIHAR	52.2
821	10586	MAHTO	M	38	MUZAFFARPUR	BIHAR	57.1
822	10588	MAHTO	M	20	MUZAFFARPUR	BIHAR	55.05
823	10589	MAHTO	M	20	MUZAFFARPUR	BIHAR	54.3
824	10590	MAHTO	F	46	MUZAFFARPUR	BIHAR	54.8
825	10592	MAHTO	F	22	MUZAFFARPUR	BIHAR	46.95
826	10637	MAHTO	M	60	MUZAFFARPUR	BIHAR	78.9
827	10901	MAHTO	F	26	VAISHALI	BIHAR	53.4
828	10902	MAHTO	M	28	MUZAFFARPUR	BIHAR	67.9
829	10932	MAHTO	M	11	MUZAFFARPUR	BIHAR	52.6
830	10933	MAHTO	F	11	MUZAFFARPUR	BIHAR	60.25
831	10934	MAHTO	F	52	MUZAFFARPUR	BIHAR	60.15
832	10936	MAHTO	F	50	MUZAFFARPUR	BIHAR	58.7
833	10939	MAHTO	F	8	MUZAFFARPUR	BIHAR	59.8
834	10944	MAHTO	M	13	MUZAFFARPUR	BIHAR	48.65
835	10946	MAHTO	F	54	MUZAFFARPUR	BIHAR	64.5
836	10947	MAHTO	F	64	MUZAFFARPUR	BIHAR	61.5
837	10948	MAHTO	M	14	MUZAFFARPUR	BIHAR	56.85
838	10950	MAHTO	M	49	MUZAFFARPUR	BIHAR	65.3
839	10951	MAHTO	M	62	MUZAFFARPUR	BIHAR	70.25
840	10952	MAHTO	M	60	MUZAFFARPUR	BIHAR	54.35
841	10955	MAHTO	M	11	MUZAFFARPUR	BIHAR	53.15
842	10958	MAHTO	M	10	MUZAFFARPUR	BIHAR	50.55
843	5257	MAHTO	F	15	MUZAFFARPUR	BIHAR	54.45
844	5258	MAHTO	F	14	MUZAFFARPUR	BIHAR	52.55
845	5259	MAHTO	M	17	MUZAFFARPUR	BIHAR	49.4
846	5260	MAHTO	F	20	MUZAFFARPUR	BIHAR	53.4
847	5261	MAHTO	M	32	MUZAFFARPUR	BIHAR	55.8
848	5269	MAHTO	F	16	MUZAFFARPUR	BIHAR	55.6
849	5270	MAHTO	F	17	MUZAFFARPUR	BIHAR	67.8
850	5272	MAHTO	F	45	MUZAFFARPUR	BIHAR	57.6
851	5273	MAHTO	M	16	MUZAFFARPUR	BIHAR	50.8
852	5274	MAHTO	F	10	MUZAFFARPUR	BIHAR	76.2
853	5275	MAHTO	F	14	MUZAFFARPUR	BIHAR	62.65
854	5276	MAHTO	M	14	MUZAFFARPUR	BIHAR	54.55
855	5303	MAHTO	M	45	MUZAFFARPUR	BIHAR	54
856	5304	MAHTO	F	40	MUZAFFARPUR	BIHAR	48.05
857	A1	MAHTO	M	45	MUZAFFARPUR	BIHAR	54
858	A2	MAHTO	F	40	MUZAFFARPUR	BIHAR	48.05
859	A6	MAHTO	F	14	MUZAFFARPUR	BIHAR	52.05
860	A7	MAHTO	F	12	MUZAFFARPUR	BIHAR	55.4
861	A8	MAHTO	F	8	MUZAFFARPUR	BIHAR	45.25
862	4	MAHTO	M	42	MUZAFFARPUR	BIHAR	77.5
863	30	MAHTO	M	24	MUZAFFARPUR	BIHAR	67
864	71	MAHTO	F	60	MUZAFFARPUR	BIHAR	68
865	72	MAHTO	M	37	MUZAFFARPUR	BIHAR	68
866	112	MAHTO	M	20	MUZAFFARPUR	BIHAR	67.2

867	113	MAHTO	F	10	MUZAFFARPUR	BIHAR	66.1
868	114	MAHTO	M	30	MUZAFFARPUR	BIHAR	73.5
869	115	MAHTO	M	15	MUZAFFARPUR	BIHAR	57.9
870	116	MAHTO	M	14	MUZAFFARPUR	BIHAR	56.65
871	117	MAHTO	F	14	MUZAFFARPUR	BIHAR	72
872	118	MAHTO	F	30	MUZAFFARPUR	BIHAR	57.9
873	128	MAHTO	F	68	MUZAFFARPUR	BIHAR	31.4
874	141	MAHTO	M	46	MUZAFFARPUR	BIHAR	77
875	155	MAHTO	M	52	MUZAFFARPUR	BIHAR	66.75
876	183-72	MAHTO	M	37	MUZAFFARPUR	BIHAR	67.5
877	10417	KUSHWAHA	M	12	MUZAFFARPUR	BIHAR	57.8
878	10418	KUSHWAHA	F	41	MUZAFFARPUR	BIHAR	60.8
879	10549	KUSHWAHA	M	8	MUZAFFARPUR	BIHAR	57.8
880	10550	KUSHWAHA	M	38	MUZAFFARPUR	BIHAR	58.8
881	10732	KUSHWAHA	M	18	GAZIPUR	UTTAR PRADESH	58.9
882	10753	KUSHWAHA	M	20	RACHI	BIHAR	55.4
883	174	KUSHWAHA	M	18	MUZAFFARPUR	BIHAR	46
884	10593	KURMI	M	45	MUZAFFARPUR	BIHAR	54.4
885	10594	KURMI	F	41	MUZAFFARPUR	BIHAR	39.9
886	10674	KURMI	M	22	CHANDAULI	UTTAR PRADESH	49.65
887	10789	KURMI	F	35	NALANDA	BIHAR	59.3
888	10791	KURMI	F	40	NALANDA	BIHAR	53.3
889	10830	KURMI	M	62	PATNA	BIHAR	51.3
890	10849	KURMI	M	49	PATNA	BIHAR	53.6
891	10860	KURMI	F	18	VAISHALI	BIHAR	56.8
892	10861	KURMI	M	49	VAISHALI	BIHAR	57.1
893	10972	KURMI	M	28	VARANASI	UTTAR PRADESH	46.9
894	7611	KURMI	F	55	GORAKHPUR	UTTAR PRADESH	51.1
895	7612	KURMI	F	42	GORAKHPUR	UTTAR PRADESH	45.1
896	7613	KURMI	F	60	GORAKHPUR	UTTAR PRADESH	54.2
897	7614	KURMI	M	40	GORAKHPUR	UTTAR PRADESH	55.2
898	7616	KURMI	M	60	GORAKHPUR	UTTAR PRADESH	63.9
899	UP-G6	KURMI	M	60	GORAKHPUR	UTTAR PRADESH	77
900	10042	JHA (BRAHMIN)	M	54	MUZAFFARPUR	BIHAR	66
901	10098	JHA (BRAHMIN)	M	38	MUZAFFARPUR	BIHAR	53.4
902	10147	JHA (BRAHMIN)	M	45	MUZAFFARPUR	BIHAR	54.2
903	10295	JHA (BRAHMIN)	F	15	MUZAFFARPUR	BIHAR	50
904	10608	JHA (BRAHMIN)	F	66	MUZAFFARPUR	BIHAR	45.6
905	10609	JHA (BRAHMIN)	M	75	MUZAFFARPUR	BIHAR	48.9
906	10610	JHA (BRAHMIN)	F	60	MUZAFFARPUR	BIHAR	47.45
907	10611	JHA (BRAHMIN)	M	70	MUZAFFARPUR	BIHAR	52.5
908	10612	JHA (BRAHMIN)	F	63	SAMASTIPUR	BIHAR	47
909	10613	JHA (BRAHMIN)	M	70	MUZAFFARPUR	BIHAR	46.45
910	10614	JHA (BRAHMIN)	M	32	MUZAFFARPUR	BIHAR	45.8
911	10615	JHA (BRAHMIN)	F	30	MUZAFFARPUR	BIHAR	47.45
912	10616	JHA (BRAHMIN)	M	27	MUZAFFARPUR	BIHAR	41.35
913	10617	JHA (BRAHMIN)	F	22	SITAMADHI	BIHAR	54.6
914	10623	JHA (BRAHMIN)	F	41	MUZAFFARPUR	BIHAR	42.25
915	10662	JHA (BRAHMIN)	M	40	MUZAFFARPUR	BIHAR	54.1
916	10673	JHA (BRAHMIN)	M	34	MADHUBAN	BIHAR	45.25
917	5271	JHA (BRAHMIN)	M	26	MUZAFFARPUR	BIHAR	57.2
918	1	JHA (BRAHMIN)	M	48	MUZAFFARPUR	BIHAR	57.5
919	2	JHA (BRAHMIN)	F	43	MUZAFFARPUR	BIHAR	53.25
920	48	JHA (BRAHMIN)	M	48	MUZAFFARPUR	BIHAR	48
921	50	JHA (BRAHMIN)	M	60	MUZAFFARPUR	BIHAR	45
922	10761	HARIJAN	M	36	JAUNPUR	UTTAR PRADESH	53.3
923	10801	HARIJAN	M	25	MAU	UTTAR PRADESH	54.3
924	10802	HARIJAN	M	23	MAU	UTTAR PRADESH	65.95
925	10840	HARIJAN	M	60	ALLAHABAD	UTTAR PRADESH	63.1
926	10842	HARIJAN	M	23	ALLAHABAD	UTTAR PRADESH	60.3
927	10848	HARIJAN	M	23	ALLAHABAD	UTTAR PRADESH	50.7
928	10856	HARIJAN	M	23	ALLAHABAD	UTTAR PRADESH	64.9
929	10866	HARIJAN	M	30	ALLAHABAD	UTTAR PRADESH	59.8
930	10867	HARIJAN	M	42	ALLAHABAD	UTTAR PRADESH	48.8
931	10868	HARIJAN	F	38	ALLAHABAD	UTTAR PRADESH	59.15
932	10869	HARIJAN	M	40	ALLAHABAD	UTTAR PRADESH	49.6
933	10870	HARIJAN	F	35	ALLAHABAD	UTTAR PRADESH	51.85
934	10871	HARIJAN	M	28	ALLAHABAD	UTTAR PRADESH	48.3
935	10872	HARIJAN	F	40	ALLAHABAD	UTTAR PRADESH	49.35
936	10873	HARIJAN	M	62	ALLAHABAD	UTTAR PRADESH	52.5
937	10874	HARIJAN	F	31	ALLAHABAD	UTTAR PRADESH	51.7
938	10875	HARIJAN	M	38	ALLAHABAD	UTTAR PRADESH	45.4
939	10876	HARIJAN	F	40	ALLAHABAD	UTTAR PRADESH	44.8
940	10877	HARIJAN	F	43	ALLAHABAD	UTTAR PRADESH	51.2
941	10878	HARIJAN	M	27	ALLAHABAD	UTTAR PRADESH	52.45
942	10880	HARIJAN	F	48	ALLAHABAD	UTTAR PRADESH	42.3
943	10882	HARIJAN	M	50	ALLAHABAD	UTTAR PRADESH	49
944	10897	HARIJAN	M	25	ALLAHABAD	UTTAR PRADESH	72.2
945	10970	HARIJAN	M	27	JAUNPUR	UTTAR PRADESH	62.5

946	10971	HARIJAN	M	29	CHANDAULI	UTTAR PRADESH	46.4
947	10009	DAS	M	12	MUZAFFARPUR	BIHAR	56.3
948	10067	DAS	M	48	MUZAFFARPUR	BIHAR	53.7
949	10103	DAS	F	23	MUZAFFARPUR	BIHAR	61
950	10197	DAS	M	24	MUZAFFARPUR	BIHAR	56.4
951	10351	DAS	F	11	MUZAFFARPUR	BIHAR	62
952	10560	DAS	F	13	MUZAFFARPUR	BIHAR	65.1
953	10597	DAS	M	52	MUZAFFARPUR	BIHAR	58.9
954	10833	DAS	F	40	VAISHALI	BIHAR	54.05
955	10841	DAS	M	31	VAISHALI	BIHAR	59.1
956	10905	DAS	F	40	MUZAFFARPUR	BIHAR	54.3
957	5300	DAS	M	14	MUZAFFARPUR	BIHAR	57.65
958	111	DAS	M	13	MUZAFFARPUR	BIHAR	53.3
959	10015	CHOUDHARY	M	11	MUZAFFARPUR	BIHAR	49
960	10090	CHOUDHARY	F	69	MUZAFFARPUR	BIHAR	62.4
961	10091	CHOUDHARY	F	36	MUZAFFARPUR	BIHAR	62.3
962	10228	CHOUDHARY	M	15	MUZAFFARPUR	BIHAR	54
963	10250	CHOUDHARY	M	43	MUZAFFARPUR	BIHAR	72
964	10338	CHOUDHARY	F	12	MUZAFFARPUR	BIHAR	58
965	10396	CHOUDHARY	F	46	MUZAFFARPUR	BIHAR	55.3
966	10460	CHOUDHARY	M	36	MUZAFFARPUR	BIHAR	57.7
967	10520	KSHTRIYA	M	64	MOTIHARI	BIHAR	55
968	10739	KSHTRIYA	M	36	AARA	BIHAR	58.8
969	10750	KSHTRIYA	F	39	GAYA	BIHAR	52.5
970	10752	KSHTRIYA	F	46	MAU	UTTAR PRADESH	48
971	10762	KSHTRIYA	F	42	JAUNPUR	UTTAR PRADESH	52.1
972	10763	KSHTRIYA	M	38	JAUNPUR	UTTAR PRADESH	46.8
973	10765	KSHTRIYA	M	48	JAUNPUR	UTTAR PRADESH	52.1
974	10766	KSHTRIYA	M	41	JAUNPUR	UTTAR PRADESH	55.45
975	10767	KSHTRIYA	F	58	JAUNPUR	UTTAR PRADESH	54.3
976	10769	KSHTRIYA	M	52	JAUNPUR	UTTAR PRADESH	46.9
977	10770	KSHTRIYA	M	43	JAUNPUR	UTTAR PRADESH	54.5
978	10771	KSHTRIYA	M	32	JAUNPUR	UTTAR PRADESH	59.95
979	10772	KSHTRIYA	M	36	JAUNPUR	UTTAR PRADESH	74.3
980	10773	KSHTRIYA	M	37	JAUNPUR	UTTAR PRADESH	46.1
981	10774	KSHTRIYA	M	40	JAUNPUR	UTTAR PRADESH	52.5
982	10775	KSHTRIYA	F	30	JAUNPUR	UTTAR PRADESH	39.5
983	10776	KSHTRIYA	M	40	JAUNPUR	UTTAR PRADESH	42.1
984	10777	KSHTRIYA	M	40	JAUNPUR	UTTAR PRADESH	45.6
985	10778	KSHTRIYA	M	25	JAUNPUR	UTTAR PRADESH	63
986	10779	KSHTRIYA	M	26	JAUNPUR	UTTAR PRADESH	46.9
987	10799	KSHTRIYA	M	34	BALIYA	UTTAR PRADESH	59.95
988	10827	KSHTRIYA	M	46	VAISHALI	BIHAR	51
989	10834	KSHTRIYA	F	25	PATNA	BIHAR	57.65
990	10854	KSHTRIYA	F	26	PATNA	BIHAR	60.6
991	10899	KSHTRIYA	M	30	VAISHALI	BIHAR	53.55
992	10959	KSHTRIYA	M	18	MUZAFFARPUR	BIHAR	50.1
993	10965	KSHTRIYA	M	28	JAUNPUR	UTTAR PRADESH	45.7
994	10969	KSHTRIYA	M	26	JAUNPUR	UTTAR PRADESH	42.85
995	10975	KSHTRIYA	M	28	JAUNPUR	UTTAR PRADESH	41
996	10014	BRAHMIN	F	9	MUZAFFARPUR	BIHAR	49
997	10045	BRAHMIN	M	45	MUZAFFARPUR	BIHAR	59.8
998	10476	BRAHMIN	M	51	MUZAFFARPUR	BIHAR	56
999	10579	BRAHMIN	M	50	MUZAFFARPUR	BIHAR	48.6
1000	10618	BRAHMIN	M	70	MUZAFFARPUR	BIHAR	53.55
1001	10619	BRAHMIN	F	24	SITAMADHI	BIHAR	51.6
1002	10620	BRAHMIN	M	70	MUZAFFARPUR	BIHAR	51.75
1003	10621	BRAHMIN	F	45	SITAMADHI	BIHAR	49.9
1004	10622	BRAHMIN	M	56	MUZAFFARPUR	BIHAR	46.1
1005	10624	BRAHMIN	M	44	MADHUBAN	BIHAR	45.9
1006	10625	BRAHMIN	F	56	SITAMADHI	BIHAR	49.75
1007	10626	BRAHMIN	F	30	MUZAFFARPUR	BIHAR	52.75
1008	10627	BRAHMIN	M	47	BUXAR	BIHAR	37.85
1009	10715	BRAHMIN	M	29	MAHOBA	UTTAR PRADESH	40.45
1010	10881	BRAHMIN	M	47	ALLAHABAD	UTTAR PRADESH	44.4
1011	10935	BRAHMIN	F	60	MUZAFFARPUR	BIHAR	52
1012	10968	BRAHMIN	M	29	SAMASTIPUR	BIHAR	42.1
1013	10988	BRAHMIN	M	19	GAZIPUR	UTTAR PRADESH	47.7
1014	11004	BRAHMIN	M	50	CHANDAULI	UTTAR PRADESH	36.25
1015	11005	BRAHMIN	M	41	BUXAR	BIHAR	71.2
1016	11006	BRAHMIN	F	21	VARANASI	UTTAR PRADESH	47.75
1017	11007	BRAHMIN	F	20	CHANDAULI	UTTAR PRADESH	46.7
1018	11008	BRAHMIN	M	33	GORAKHPUR	UTTAR PRADESH	43
1019	11009	BRAHMIN	F	28	FATEHPUR	UTTAR PRADESH	36.3
1020	11010	BRAHMIN	M	27	JAUNPUR	UTTAR PRADESH	47.85
1021	11011	BRAHMIN	M	30	SONEBHADRA	UTTAR PRADESH	43.6
1022	11012	BRAHMIN	M	30	VARANASI	UTTAR PRADESH	43.2
1023	11013	BRAHMIN	M	32	DEORIA	UTTAR PRADESH	49.5
1024	11014	BRAHMIN	M	32	ALLAHABAD	UTTAR PRADESH	40.45

1025	11015	BRAHMIN	M	41	JAUNPUR	UTTAR PRADESH	48.85
1026	11016	BRAHMIN	M	42	VARANASI	UTTAR PRADESH	47.35
1027	11017	BRAHMIN	M	35	VARANASI	UTTAR PRADESH	46.3
1028	11018	BRAHMIN	M	43	CHANDAULI	UTTAR PRADESH	48.65
1029	11019	BRAHMIN	F	33	BALIYA	UTTAR PRADESH	40.7
1030	11020	BRAHMIN	M	19	VARANASI	UTTAR PRADESH	43.2
1031	11021	BRAHMIN	M	20	JAUNPUR	UTTAR PRADESH	53.7
1032	11022	BRAHMIN	M	28	FAIZABAD	UTTAR PRADESH	42.4
1033	11023	BRAHMIN	M	21	AZAMGARH	UTTAR PRADESH	34.25
1034	11024	BRAHMIN	M	28	VARANASI	UTTAR PRADESH	38.15
1035	11025	BRAHMIN	F	25	AMBEDKARNAGAR	UTTAR PRADESH	40.1
1036	11026	BRAHMIN	M	18	JAUNPUR	UTTAR PRADESH	34.75
1037	11027	BRAHMIN	M	24	JAUNPUR	UTTAR PRADESH	39.65
1038	11028	BRAHMIN	F	28	ALLAHABAD	UTTAR PRADESH	37.9
1039	11029	BRAHMIN	F	32	JAUNPUR	UTTAR PRADESH	36.35
1040	11030	BRAHMIN	F	19	VARANASI	UTTAR PRADESH	47
1041	11031	BRAHMIN	F	19	BALIYA	UTTAR PRADESH	48.25
1042	11032	BRAHMIN	F	19	VARANASI	UTTAR PRADESH	43.25
1043	11033	BRAHMIN	M	22	VARANASI	UTTAR PRADESH	40.35
1044	11034	BRAHMIN	M	50	AZAMGARH	UTTAR PRADESH	42.45
1045	11035	BRAHMIN	M	47	CHAMAULI	UTTAR PRADESH	42.85
1046	11036	BRAHMIN	M	34	BALIYA	UTTAR PRADESH	46.3
1047	11037	BRAHMIN	M	25	CHANDAULI	UTTAR PRADESH	40.15
1048	11038	BRAHMIN	M	22	AZAMGARH	UTTAR PRADESH	40.25
1049	11039	BRAHMIN	M	24	VARANASI	UTTAR PRADESH	41.2
1050	11040	BRAHMIN	M	36	VARANASI	UTTAR PRADESH	42.45
1051	11041	BRAHMIN	M	52	CHANDAULI	UTTAR PRADESH	44.8
1052	11042	BRAHMIN	M	37	CHANDAULI	UTTAR PRADESH	48.95
1053	11043	BRAHMIN	M	48	GAZIPUR	UTTAR PRADESH	47.15
1054	11044	BRAHMIN	M	51	VARANASI	UTTAR PRADESH	44.7
1055	11045	BRAHMIN	M	39	JAUNPUR	UTTAR PRADESH	45.25
1056	11046	BRAHMIN	F	38	PRATAPGARH	UTTAR PRADESH	40.7
1057	11047	BRAHMIN	F	33	VARANASI	UTTAR PRADESH	43.85
1058	11048	BRAHMIN	M	40	AZAMGARH	UTTAR PRADESH	47.95
1059	11049	BRAHMIN	M	24	AZAMGARH	UTTAR PRADESH	45.25
1060	11050	BRAHMIN	M	21	JAUNPUR	UTTAR PRADESH	42.1
1061	11051	BRAHMIN	M	65	VARANASI	UTTAR PRADESH	44.1
1062	11052	BRAHMIN	F	53	CHANDAULI	UTTAR PRADESH	46.05
1063	32	BRAHMIN	F	26	MUZAFFARPUR	BIHAR	50
1064	65	BRAHMIN	F	16	MUZAFFARPUR	BIHAR	45.5
1065	184	BRAHMIN	M	51	VARANASI	UTTAR PRADESH	46
1066	185	BRAHMIN	M	50	CHANDAULI	UTTAR PRADESH	36.25
1067	186	BRAHMIN	F	21	VARANASI	UTTAR PRADESH	47.75
1068	187	BRAHMIN	F	20	CHANDAULI	UTTAR PRADESH	46.7
1069	188	BRAHMIN	M	33	GORAKHPUR	UTTAR PRADESH	42.95
1070	189	BRAHMIN	F	28	FATEHPUR	UTTAR PRADESH	36
1071	190	BRAHMIN	M	27	JAUNPUR	UTTAR PRADESH	47.85
1072	191	BRAHMIN	M	30	SONEBHADRA	UTTAR PRADESH	43.6
1073	10782	BHUMIHAR	M	34	MAU	UTTAR PRADESH	47.15
1074	10783	BHUMIHAR	F	30	BUXAR	BIHAR	41.35
1075	10784	BHUMIHAR	M	19	RACHI	BIHAR	42.7
1076	10785	BHUMIHAR	M	31	GAZIPUR	UTTAR PRADESH	42.15
1077	10795	BHUMIHAR	M	34	GAZIPUR	UTTAR PRADESH	49.85
1078	10797	BHUMIHAR	M	56	MAU	UTTAR PRADESH	54.3
1079	10798	BHUMIHAR	M	26	MAU	UTTAR PRADESH	55.95
1080	10800	BHUMIHAR	M	39	MAU	UTTAR PRADESH	50.7
1081	10803	BHUMIHAR	M	30	MAU	UTTAR PRADESH	47.25
1082	10804	BHUMIHAR	M	39	MAU	UTTAR PRADESH	50.45
1083	10805	BHUMIHAR	M	29	MAU	UTTAR PRADESH	40.5
1084	10806	BHUMIHAR	M	36	MAU	UTTAR PRADESH	50.8
1085	10807	BHUMIHAR	M	42	MAU	UTTAR PRADESH	45.15
1086	10808	BHUMIHAR	M	26	MAU	UTTAR PRADESH	43.7
1087	10809	BHUMIHAR	M	31	MAU	UTTAR PRADESH	43.55
1088	10810	BHUMIHAR	M	42	MAU	UTTAR PRADESH	46.9
1089	10811	BHUMIHAR	M	40	MAU	UTTAR PRADESH	42.3
1090	10812	BHUMIHAR	M	41	MAU	UTTAR PRADESH	48.6
1091	10814	BHUMIHAR	M	21	MAU	UTTAR PRADESH	48.85
1092	10815	BHUMIHAR	M	32	MAU	UTTAR PRADESH	56.25
1093	10816	BHUMIHAR	M	40	GAZIPUR	UTTAR PRADESH	47.3
1094	10817	BHUMIHAR	M	32	MAU	UTTAR PRADESH	49.9
1095	10818	BHUMIHAR	M	26	MAU	UTTAR PRADESH	46.9
1096	10819	BHUMIHAR	M	36	MAU	UTTAR PRADESH	54.1
1097	10820	BHUMIHAR	F	30	MAU	UTTAR PRADESH	46.45
1098	10821	BHUMIHAR	M	35	MAU	UTTAR PRADESH	44.2
1099	10822	BHUMIHAR	M	43	MAU	UTTAR PRADESH	45.45
1100	10823	BHUMIHAR	M	32	AZAMGARH	UTTAR PRADESH	41.6
1101	10824	BHUMIHAR	M	37	MAU	UTTAR PRADESH	45.8
1102	10845	BHUMIHAR	F	50	GAYA	BIHAR	47.5
1103	10962	BHUMIHAR	M	52	BUXAR	BIHAR	39.05

1104	2934	BHUMIHAR	M	54	VARANASI	UTTAR PRADESH	39.85
1105	49	BHUMIHAR	M	32	MUZAFFARPUR	BIHAR	43
1106	51	BHUMIHAR	M	20	MUZAFFARPUR	BIHAR	45
1107	73	BHUMIHAR	F	36	MUZAFFARPUR	BIHAR	38
1108	74	BHUMIHAR	M	20	MUZAFFARPUR	BIHAR	40
1109	75	BHUMIHAR	M	18	MUZAFFARPUR	BIHAR	37.5
1110	76	BHUMIHAR	M	20	MUZAFFARPUR	BIHAR	41
1111	147	BHUMIHAR	F	11	MUZAFFARPUR	BIHAR	61.55
1112	170	BHUMIHAR	M	18	MUZAFFARPUR	BIHAR	47
1113	171	BHUMIHAR	M	17	MUZAFFARPUR	BIHAR	48.3
1114	172	BHUMIHAR	M	18	MUZAFFARPUR	BIHAR	46.1
1115	173	BHUMIHAR	M	16	MUZAFFARPUR	BIHAR	54
1116	175	BHUMIHAR	M	18	MUZAFFARPUR	BIHAR	54
1117	179-5425	BHUMIHAR	M	10	MUZAFFARPUR	BIHAR	42.8
1118	180-N	BHUMIHAR	M	10	MUZAFFARPUR	BIHAR	41.5
1119	192	BHUMIHAR	M	39	MAU	UTTAR PRADESH	50.7
1120	193	BHUMIHAR	M	30	MAU	UTTAR PRADESH	47.25
1121	194	BHUMIHAR	M	39	MAU	UTTAR PRADESH	50.45
1122	195	BHUMIHAR	M	29	MAU	UTTAR PRADESH	40.5
1123	196	BHUMIHAR	M	36	MAU	UTTAR PRADESH	50.8
1124	197	BHUMIHAR	M	42	MAU	UTTAR PRADESH	45.15
1125	198	BHUMIHAR	M	26	MAU	UTTAR PRADESH	43.7
1126	199	BHUMIHAR	M	31	MAU	UTTAR PRADESH	43.55
1127	10049	BHAGAT	M	15	MUZAFFARPUR	BIHAR	61.9
1128	10166	BHAGAT	M	35	MUZAFFARPUR	BIHAR	60.8
1129	10248	BHAGAT	F	34	MUZAFFARPUR	BIHAR	63.2
1130	10249	BHAGAT	F	7	MUZAFFARPUR	BIHAR	89.9
1131	10308	BHAGAT	M	40	MUZAFFARPUR	BIHAR	56
1132	10475	BHAGAT	F	38	MUZAFFARPUR	BIHAR	52
1133	10514	BHAGAT	M	56	MOTIHARI	BIHAR	60
1134	10647	BHAGAT	M	51	MUZAFFARPUR	BIHAR	71.65
1135	10829	BHAGAT	M	48	PATNA	BIHAR	53.7
1136	10847	BHAGAT	M	20	MOTIHARI	BIHAR	75.65
1137	10864	BHAGAT	M	14	VAISHALI	BIHAR	63.1
1138	41	BHAGAT	F	28	MUZAFFARPUR	BIHAR	65
1139	92	BHAGAT	M	32	MUZAFFARPUR	BIHAR	59
1140	94	BHAGAT	M	62	MUZAFFARPUR	BIHAR	88
1141	96	BHAGAT	M	40	MUZAFFARPUR	BIHAR	78
1142	100	BHAGAT	F	18	MUZAFFARPUR	BIHAR	68
1143	103	BHAGAT	F	10	MUZAFFARPUR	BIHAR	62.6
1144	104	BHAGAT	M	10	MUZAFFARPUR	BIHAR	70.3
1145	105	BHAGAT	M	14	MUZAFFARPUR	BIHAR	69.5
1146	106	BHAGAT	M	62	MUZAFFARPUR	BIHAR	67.4
1147	107	BHAGAT	M	36	MUZAFFARPUR	BIHAR	59.9
1148	108	BHAGAT	M	13	MUZAFFARPUR	BIHAR	69.3
1149	109	BHAGAT	F	13	MUZAFFARPUR	BIHAR	82.9
1150	110	BHAGAT	F	18	MUZAFFARPUR	BIHAR	54.3
1151	10085	BANIYA	M	47	MUZAFFARPUR	BIHAR	66.1
1152	10781	BANIYA	M	37	VARANASI	UTTAR PRADESH	52.1
1153	10788	BANIYA	M	21	PATNA	BIHAR	51.5
1154	10813	BANIYA	M	37	GAZIPUR	UTTAR PRADESH	47.05
1155	10826	BANIYA	M	20	PATNA	BIHAR	51.4
1156	10863	BANIYA	F	43	VAISHALI	BIHAR	48.9
1157	10963	BANIYA	M	32	MUZAFFARPUR	BIHAR	46.9
1158	10964	BANIYA	F	26	RACHI	BIHAR	35.9
1159	10973	BANIYA	F	28	JHASI	UTTAR PRADESH	39.9
1160	10979	BANIYA	F	30	VARANASI	UTTAR PRADESH	50
1161	10980	BANIYA	F	29	LUCKNOW	UTTAR PRADESH	41.2
1162	10981	BANIYA	F	26	LUCKNOW	UTTAR PRADESH	42.3
1163	10982	BANIYA	M	32	VARANASI	UTTAR PRADESH	49.5
1164	10983	BANIYA	M	36	MIRZAPUR	UTTAR PRADESH	47.3
1165	10571	SAH	M	56	MUZAFFARPUR	BIHAR	57.3
1166	10570	RAM	F	40	MUZAFFARPUR	BIHAR	53.7
1167	10569	RAI	M	42	MUZAFFARPUR	BIHAR	43.8

AVG MI: Average melanin index

Table S2. Sample description of individuals in Cohort 2 with rs1426654 and rs2470102 genotyping results.

Sl no	Sample ID	Ethnic group	Social Catego	Sex	Age	District	State	Avg MI	rs1426654	rs2470102
1	5080	BHAGAT	OBC	M	51	MUZAFFARPUR	BIHAR	71.65	GG	AG
2	5139	BHAGAT	OBC	M	20	MOTIHARI	BIHAR	75.65	AG	AG
3	94	BHAGAT	OBC	M	62	MUZAFFARPUR	BIHAR	88	AG	AG
4	96	BHAGAT	OBC	M	40	MUZAFFARPUR	BIHAR	78	GG	GG
5	103	BHAGAT	OBC	F	10	MUZAFFARPUR	BIHAR	62.6	AA	AA
6	104	BHAGAT	OBC	M	10	MUZAFFARPUR	BIHAR	70.3	AA	AA
7	105	BHAGAT	OBC	M	14	MUZAFFARPUR	BIHAR	69.5	AG	AG
8	106	BHAGAT	OBC	M	62	MUZAFFARPUR	BIHAR	67.4	AA	AA
9	107	BHAGAT	OBC	M	36	MUZAFFARPUR	BIHAR	59.9	AA	AA
10	108	BHAGAT	OBC	M	13	MUZAFFARPUR	BIHAR	69.3	GG	GG
11	109	BHAGAT	OBC	F	13	MUZAFFARPUR	BIHAR	82.9	AG	AG
12	110	BHAGAT	OBC	F	18	MUZAFFARPUR	BIHAR	54.3	AA	AA
13	92	BHAGAT	OBC	M	32	MUZAFFARPUR	BIHAR	59	AA	AA
14	5137	BHUMIHAAR	GENERAL	F	50	GAYA	BIHAR	47.5	AG	AG
15	2909	BHUMIHAAR	GENERAL	M	39	MAU	UTTAR PRADESH	50.7	AA	AA
16	2910	BHUMIHAAR	GENERAL	M	30	MAU	UTTAR PRADESH	47.25	AA	AA
17	2911	BHUMIHAAR	GENERAL	M	39	MAU	UTTAR PRADESH	50.45	AA	AA
18	2912	BHUMIHAAR	GENERAL	M	29	MAU	UTTAR PRADESH	40.5	AA	AA
19	2913	BHUMIHAAR	GENERAL	M	36	MAU	UTTAR PRADESH	50.8	AA	AA
20	2914	BHUMIHAAR	GENERAL	M	42	MAU	UTTAR PRADESH	45.15	AA	AA
21	2916	BHUMIHAAR	GENERAL	M	31	MAU	UTTAR PRADESH	43.55	AA	AA
22	2917	BHUMIHAAR	GENERAL	M	42	MAU	UTTAR PRADESH	46.9	AA	AA
23	2918	BHUMIHAAR	GENERAL	M	40	MAU	UTTAR PRADESH	42.3	AA	AA
24	2919	BHUMIHAAR	GENERAL	M	41	MAU	UTTAR PRADESH	48.6	AA	AA
25	2920	BHUMIHAAR	GENERAL	M	21	MAU	UTTAR PRADESH	48.85	AG	AG
26	2921	BHUMIHAAR	GENERAL	M	32	MAU	UTTAR PRADESH	56.25	AA	AA
27	2922	BHUMIHAAR	GENERAL	M	40	GAZIPUR	UTTAR PRADESH	47.3	AG	AG
28	2923	BHUMIHAAR	GENERAL	M	32	MAU	UTTAR PRADESH	49.9	AA	AA
29	2924	BHUMIHAAR	GENERAL	M	26	MAU	UTTAR PRADESH	46.9	AA	AA
30	73	BHUMIHAAR	GENERAL	F	36	MUZAFFARPUR	BIHAR	38	AG	AG
31	74	BHUMIHAAR	GENERAL	M	20	MUZAFFARPUR	BIHAR	40	AA	AA
32	147	BHUMIHAAR	GENERAL	F	11	MUZAFFARPUR	BIHAR	61.55	AA	AA
33	171	BHUMIHAAR	GENERAL	M	17	MUZAFFARPUR	BIHAR	48.3	AA	GG
34	2901	BHUMIHAAR	GENERAL	M	33	MAU	UTTAR PRADESH	42.2	AG	AG
35	2902	BHUMIHAAR	GENERAL	M	34	MAU	UTTAR PRADESH	47.15	AG	AG
36	2903	BHUMIHAAR	GENERAL	F	30	BUXAR	BIHAR	41.35	AG	AG
37	2904	BHUMIHAAR	GENERAL	M	19	PATNA	BIHAR	42.7	AG	AG
38	2905	BHUMIHAAR	GENERAL	M	31	GAZIPUR	UTTAR PRADESH	42.15	AG	AG
39	2906	BHUMIHAAR	GENERAL	M	34	GAZIPUR	UTTAR PRADESH	49.85	AA	AG
40	2907	BHUMIHAAR	GENERAL	M	56	MAU	UTTAR PRADESH	54.3	AA	AG
41	2908	BHUMIHAAR	GENERAL	M	26	MAU	UTTAR PRADESH	55.95	AG	AG
42	172	BHUMIHAAR	GENERAL	M	18	MUZAFFARPUR	BIHAR	46.1	AG	AA
43	173	BHUMIHAAR	GENERAL	M	16	MUZAFFARPUR	BIHAR	54	AG	GG
44	179-5425	BHUMIHAAR	GENERAL	M	10	MUZAFFARPUR	BIHAR	42.8	AA	AA
45	180-N	BHUMIHAAR	GENERAL	M	10	MUZAFFARPUR	BIHAR	41.5	AA	AA
46	2934	BHUMIHAAR	GENERAL	M	54	VARANASI	BIHAR	39.85	AA	AA
47	75	BHUMIHAAR	GENERAL	M	18	MUZAFFARPUR	BIHAR	37.5	AA	AA
48	5052	BRAHMIN	GENERAL	M	70	MUZAFFARPUR	BIHAR	51.75	GG	AG
49	5053	BRAHMIN	GENERAL	F	45	SITAMADHI	BIHAR	49.9	AA	AA
50	5054	BRAHMIN	GENERAL	M	56	MUZAFFARPUR	BIHAR	46.1	AG	AG
51	5056	BRAHMIN	GENERAL	M	44	MADHUBAN	BIHAR	45.9	AA	AA
52	5155	BRAHMIN	GENERAL	F	43	VAISALI	BIHAR	48.9	AG	AG
53	5209	BRAHMIN	GENERAL	F	60	MUZAFFARPUR	BIHAR	52	AA	AA
54	1701	BRAHMIN	GENERAL	M	51	VARANASI	UTTAR PRADESH	46	GG	GG
55	1702	BRAHMIN	GENERAL	M	50	CHANDAULI	UTTAR PRADESH	36.25	AA	AA
56	1704	BRAHMIN	GENERAL	F	21	VARANASI	UTTAR PRADESH	47.75	AA	AA
57	1705	BRAHMIN	GENERAL	F	20	CHANDAULI	UTTAR PRADESH	46.7	AA	AA
58	1707	BRAHMIN	GENERAL	F	28	FATEHPUR	UTTAR PRADESH	35.75	AA	AA
59	1708	BRAHMIN	GENERAL	M	27	JAUNPUR	UTTAR PRADESH	47.85	AA	AA
60	1709	BRAHMIN	GENERAL	M	30	SONEBHADRA	UTTAR PRADESH	43.6	GG	GG
61	1710	BRAHMIN	GENERAL	M	30	VARANASI	UTTAR PRADESH	43.2	AA	AA
62	1711	BRAHMIN	GENERAL	M	32	DEORIA	UTTAR PRADESH	49.5	AA	AA
63	1712	BRAHMIN	GENERAL	M	32	ALLAHABAD	UTTAR PRADESH	40.45	AA	AA
64	1713	BRAHMIN	GENERAL	M	41	JAUNPUR	UTTAR PRADESH	48.85	AG	AA
65	1714	BRAHMIN	GENERAL	M	42	VARANASI	UTTAR PRADESH	47.35	GG	AA
66	1715	BRAHMIN	GENERAL	M	35	VARANASI	UTTAR PRADESH	46.3	AG	AG
67	1716	BRAHMIN	GENERAL	M	43	CHANDAULI	UTTAR PRADESH	48.65	AA	AA
68	1717	BRAHMIN	GENERAL	F	33	BALIYA	UTTAR PRADESH	40.7	AG	AG
69	1718	BRAHMIN	GENERAL	M	19	VARANASI	UTTAR PRADESH	43.2	AG	AG
70	1719	BRAHMIN	GENERAL	M	20	JAUNPUR	UTTAR PRADESH	53.7	GG	AG
71	1720	BRAHMIN	GENERAL	M	28	FAIZABAD	UTTAR PRADESH	42.4	AA	AA
72	1721	BRAHMIN	GENERAL	M	21	AZAMGARH	UTTAR PRADESH	34.25	AA	AA
73	1722	BRAHMIN	GENERAL	M	28	VARANASI	UTTAR PRADESH	38.15	AA	AA
74	1723	BRAHMIN	GENERAL	F	25	AMBEDKARNAGAR	UTTAR PRADESH	40.1	AA	AA
75	1724	BRAHMIN	GENERAL	M	18	JAUNPUR	UTTAR PRADESH	34.75	AA	AA
76	1725	BRAHMIN	GENERAL	M	24	JAUNPUR	UTTAR PRADESH	39.65	AA	AA
77	1726	BRAHMIN	GENERAL	F	28	ALLAHABAD	UTTAR PRADESH	37.9	AA	AA
78	1727	BRAHMIN	GENERAL	F	32	JAUNPUR	UTTAR PRADESH	36.35	AA	AA
79	1728	BRAHMIN	GENERAL	F	19	VARANASI	UTTAR PRADESH	47	AG	AG
80	1729	BRAHMIN	GENERAL	F	19	BALIYA	UTTAR PRADESH	48.25	AA	AA
81	1730	BRAHMIN	GENERAL	F	19	VARANASI	UTTAR PRADESH	43.25	AA	AA
82	1731	BRAHMIN	GENERAL	M	22	VARANASI	UTTAR PRADESH	40.35	AG	AG
83	1732	BRAHMIN	GENERAL	M	50	AZAMGARH	UTTAR PRADESH	42.45	AA	AA
84	1733	BRAHMIN	GENERAL	M	47	VARANASI	UTTAR PRADESH	42.85	AG	AG
85	1742	BRAHMIN	GENERAL	M	51	VARANASI	UTTAR PRADESH	44.7	AG	AG
86	1743	BRAHMIN	GENERAL	M	39	JAUNPUR	UTTAR PRADESH	45.25	AA	AA
87	1744	BRAHMIN	GENERAL	F	38	PRATAPGARH	UTTAR PRADESH	40.7	AA	AA
88	1745	BRAHMIN	GENERAL	F	33	VARANASI	UTTAR PRADESH	43.85	AA	AA
89	1746	BRAHMIN	GENERAL	M	40	AZAMGARH	UTTAR PRADESH	47.95	AA	AA

90	1747	BRAHMIN	GENERAL	M	24	AZAMGARH	UTTAR PRADESH	45.25	AA	AA
91	1748	BRAHMIN	GENERAL	M	21	JAUNPUR	UTTAR PRADESH	42.1	AA	AA
92	1751	BRAHMIN	GENERAL	M	53	MIRZAPUR	UTTAR PRADESH	58.5	AG	AA
93	1753	BRAHMIN	GENERAL	M	44	MIRZAPUR	UTTAR PRADESH	56.5	AA	AA
94	1756	BRAHMIN	GENERAL	M	59	JAUNPUR	UTTAR PRADESH	46.8	AA	AA
95	1759	BRAHMIN	GENERAL	M	52	JAUNPUR	UTTAR PRADESH	46.9	AA	AA
96	1760	BRAHMIN	GENERAL	M	43	JAUNPUR	UTTAR PRADESH	54.5	AA	AA
97	5050	BRAHMIN	GENERAL	M	70	MUZAFFARPUR	BIHAR	53.55	AA	AA
98	1715	BRAHMIN	GENERAL	M	35	VARANASI	UTTAR PRADESH	46.3	AG	AG
99	1746	BRAHMIN	GENERAL	M	40	AZAMGARH	UTTAR PRADESH	47.95	AA	AA
100	1747	BRAHMIN	GENERAL	M	24	AZAMGARH	UTTAR PRADESH	45.25	AA	AA
101	1750	BRAHMIN	GENERAL	F	53	CHANDAULI	UTTAR PRADESH	46.05	AA	AA
102	1752	BRAHMIN	GENERAL	M	52	MIRZAPUR	UTTAR PRADESH	57.5	AA	AA
103	1754	BRAHMIN	GENERAL	M	32	MUZAFFARPUR	BIHAR	46.9	AA	AA
104	1755	BRAHMIN	GENERAL	M	25	VARANASI	UTTAR PRADESH	46.9	AA	AA
105	1761	BRAHMIN	GENERAL	M	37	JAUNPUR	UTTAR PRADESH	46.1	AA	AA
106	1763	BRAHMIN	GENERAL	F	30	JAUNPUR	UTTAR PRADESH	39.5	AA	AA
107	1764	BRAHMIN	GENERAL	M	40	JAUNPUR	UTTAR PRADESH	42.1	AA	AA
108	1765	BRAHMIN	GENERAL	M	40	JAUNPUR	UTTAR PRADESH	45.6	AA	AG
109	5119	KSHATRIYA	GENERAL	M	46	VAISALI	BIHAR	51	AA	AA
110	5126	KSHATRIYA	GENERAL	F	25	PATNA	BIHAR	57.65	AA	AA
111	5146	KSHATRIYA	GENERAL	F	26	PATNA	BIHAR	60.6	AG	AA
112	5158	KSHATRIYA	GENERAL	M	18	MUZAFFARPUR	BIHAR	50.1	AG	AA
113	5173	KSHATRIYA	GENERAL	M	30	VAISALI	BIHAR	53.55	AG	AG
114	36	KSHATRIYA	GENERAL	M	56	MUZAFFARPUR	BIHAR	65	AG	AG
115	78	KSHATRIYA	GENERAL	M	21	MUZAFFARPUR	BIHAR	44	AG	AA
116	135	KSHATRIYA	GENERAL	M	62	MUZAFFARPUR	BIHAR	71	AG	AG
117	5029	DAS	OBC	M	52	MUZAFFARPUR	BIHAR	58.9	AG	AG
118	5125	DAS	OBC	F	40	VAISALI	BIHAR	54.05	AA	AA
119	5133	DAS	OBC	M	31	VAISALI	BIHAR	59.1	AG	AA
120	5179	DAS	OBC	F	40	MUZAFFARPUR	BIHAR	54.3	AA	AA
121	111	DAS	OBC	M	13	MUZAFFARPUR	BIHAR	53.3	AG	AG
122	5300	DAS	OBC	M	14	MUZAFFARPUR	BIHAR	57.65	AG	AG
123	5132	HARIJAN	SC	M	60	PATNA	BIHAR	63.1	GG	GG
124	5134	HARIJAN	SC	M	23	BUXAR	BIHAR	60.3	AG	AA
125	5140	HARIJAN	SC	M	23	PATNA	BIHAR	50.7	AG	AG
126	5148	HARIJAN	SC	M	23	PATNA	BIHAR	64.9	GG	GG
127	5171	HARIJAN	SC	M	25	PATNA	BIHAR	72.2	AG	AG
128	5040	JHA	GENERAL	F	66	MUZAFFARPUR	BIHAR	45.6	AG	AG
129	5041	JHA	GENERAL	M	75	MUZAFFARPUR	BIHAR	48.9	AG	AA
130	5042	JHA	GENERAL	F	60	MUZAFFARPUR	BIHAR	47.45	AA	AA
131	5055	JHA	GENERAL	F	41	MUZAFFARPUR	BIHAR	42.25	AA	AA
132	5095	JHA	GENERAL	M	40	MUZAFFARPUR	BIHAR	54.1	AA	AA
133	5271	JHA	GENERAL	M	26	MUZAFFARPUR	BIHAR	57.2	AG	AA
134	1	JHA	GENERAL	M	48	MUZAFFARPUR	BIHAR	57.5	AG	AA
135	2	JHA	GENERAL	F	43	MUZAFFARPUR	BIHAR	53.25	AA	AA
136	5041	JHA	GENERAL	M	72	MUZAFFARPUR	BIHAR	48.9	GG	AA
137	5109	KURMI	OBC	M	45	PATNA	BIHAR	50.9	GG	AG
138	5111	KURMI	OBC	F	35	NALANDA	BIHAR	59.3	AG	AG
139	5113	KURMI	OBC	F	40	NALANDA	BIHAR	53.3	AA	AA
140	5122	KURMI	OBC	M	62	PATNA	BIHAR	51.3	AG	AG
141	5141	KURMI	OBC	M	49	PATNA	BIHAR	53.6	AG	AA
142	5152	KURMI	OBC	F	18	VAISALI	BIHAR	56.8	AG	AG
143	5153	KURMI	OBC	M	49	VAISALI	BIHAR	57.1	GG	GG
144	5164	KURMI	OBC	F	16	PATNA	BIHAR	59.7	AG	AG
145	5020	MAHTO	SC	M	20	MUZAFFARPUR	BIHAR	55.05	AG	AG
146	5070	MAHTO	SC	M	60	MUZAFFARPUR	BIHAR	78.9	GG	GG
147	5175	MAHTO	SC	F	26	VAISALI	BIHAR	53.4	GG	GG
148	5206	MAHTO	SC	M	11	MUZAFFARPUR	BIHAR	52.6	GG	GG
149	5207	MAHTO	SC	F	11	MUZAFFARPUR	BIHAR	60.25	AG	GG
150	5210	MAHTO	SC	F	50	MUZAFFARPUR	BIHAR	58.7	GG	GG
151	5214	MAHTO	SC	F	8	MUZAFFARPUR	BIHAR	59.8	GG	GG
152	5257	MAHTO	OBC	F	15	MUZAFFARPUR	BIHAR	54.45	AG	AG
153	5258	MAHTO	OBC	F	14	MUZAFFARPUR	BIHAR	52.55	AA	AA
154	5259	MAHTO	OBC	M	17	MUZAFFARPUR	BIHAR	49.4	AA	AA
155	5269	MAHTO	OBC	F	16	MUZAFFARPUR	BIHAR	55.6	AA	AA
156	5270	MAHTO	OBC	F	17	MUZAFFARPUR	BIHAR	67.8	AG	GG
157	5272	MAHTO	OBC	F	45	MUZAFFARPUR	BIHAR	57.6	AA	AA
158	5273	MAHTO	OBC	M	16	MUZAFFARPUR	BIHAR	50.8	AA	AA
159	5274	MAHTO	OBC	F	10	MUZAFFARPUR	BIHAR	76.2	GG	GG
160	5275	MAHTO	OBC	F	14	MUZAFFARPUR	BIHAR	62.65	AG	AG
161	5276	MAHTO	OBC	M	14	MUZAFFARPUR	BIHAR	54.55	AG	AA
162	5303	MAHTO	OBC	M	45	MUZAFFARPUR	BIHAR	54	AG	AG
163	5304	MAHTO	OBC	F	40	MUZAFFARPUR	BIHAR	48.05	AG	AG
164	72	MAHTO	OBC	M	37	MUZAFFARPUR	BIHAR	68	AG	AG
165	112	MAHTO	OBC	M	20	MUZAFFARPUR	BIHAR	67.2	GG	AG
166	113	MAHTO	OBC	F	10	MUZAFFARPUR	BIHAR	66.1	AG	AG
167	114	MAHTO	OBC	M	30	MUZAFFARPUR	BIHAR	73.5	AG	AG
168	115	MAHTO	OBC	M	15	MUZAFFARPUR	BIHAR	57.9	AA	AA
169	117	MAHTO	OBC	F	14	MUZAFFARPUR	BIHAR	72	AG	AG
170	118	MAHTO	OBC	F	30	MUZAFFARPUR	BIHAR	57.9	AG	AG
171	128	MAHTO	OBC	F	68	MUZAFFARPUR	BIHAR	31.4	AG	AG
172	141	MAHTO	OBC	M	46	MUZAFFARPUR	BIHAR	77	AG	AG
173	155	MAHTO	SC	M	52	MUZAFFARPUR	BIHAR	66.75	AG	AG
174	17	MAHTO	OBC	M	60	MUZAFFARPUR	BIHAR	52.5	AG	AG
175	5020	MAHTO	SC	M	20	MUZAFFARPUR	BIHAR	55.05	AG	AG
176	5176	MAHTO	SC	M	28	MUZAFFARPUR	BIHAR	67.9	GG	GG
177	5219	MAHTO	SC	M	13	MUZAFFARPUR	BIHAR	48.65	AA	AA
178	183-72	MAHTO	OBC	M	37	MUZAFFARPUR	BIHAR	67.5	AG	AG
179	A1	MAHTO	OBC	M	45	MUZAFFARPUR	BIHAR	54	AG	AG
180	A2	MAHTO	OBC	F	40	MUZAFFARPUR	BIHAR	48.05	AG	AG
181	A4	MAHTO	OBC	M	10	MUZAFFARPUR	BIHAR	41.55	AA	AA

182	A5	MAHTO	OBC	M	6	MUZAFFARPUR	BIHAR	27.6	AG	AG
183	A6	MAHTO	OBC	F	14	MUZAFFARPUR	BIHAR	52.05	GG	AG
184	A7	MAHTO	OBC	F	12	MUZAFFARPUR	BIHAR	55.4	AA	AA
185	A8	MAHTO	OBC	F	8	MUZAFFARPUR	BIHAR	45.25	AA	AA
186	5020	MAHTO	SC	M	20	MUZAFFARPUR	BIHAR	55.05	AG	AG
187	5260	MAHTO	OBC	F	20	MUZAFFARPUR	BIHAR	53.4	AG	AG
188	4	MAHTO	OBC	M	42	MUZAFFARPUR	BIHAR	77.5	AG	GG
189	141	MAHTO	OBC	M	46	MUZAFFARPUR	BIHAR	77	AG	AG
190	5030	MANDAL	SC	M	45	MUZAFFARPUR	BIHAR	42.8	AG	AG
191	5031	MANDAL	SC	F	28	MUZAFFARPUR	BIHAR	47.25	AA	AA
192	5033	MANDAL	SC	F	39	MUZAFFARPUR	BIHAR	52.3	AG	AG
193	5034	MANDAL	SC	F	53	MUZAFFARPUR	BIHAR	48.8	AG	AG
194	5033	MANDAL	SC	F	39	MUZAFFARPUR	BIHAR	52.3	GG	AG
195	5034	MANDAL	SC	F	53	MUZAFFARPUR	BIHAR	48.8	AG	AG
196	5074	MANJHI	SC	M	40	MUZAFFARPUR	BIHAR	78	GG	AA
197	5075	MANJHI	SC	M	26	MUZAFFARPUR	BIHAR	58.7	AG	AA
198	5077	MANJHI	SC	M	19	MUZAFFARPUR	BIHAR	76.2	GG	AG
199	5078	MANJHI	SC	M	62	MOTIHARI	BIHAR	82.15	AG	AA
200	5135	MANJHI	SC	M	17	PATNA	BIHAR	77.5	GG	GG
201	5166	MANJHI	SC	M	50	PATNA	BIHAR	63	AG	AG
202	5198	MANJHI	SC	M	46	MUZAFFARPUR	BIHAR	67.65	GG	GG
203	5199	MANJHI	SC	F	26	MUZAFFARPUR	BIHAR	56.45	AG	AG
204	5201	MANJHI	SC	F	19	MUZAFFARPUR	BIHAR	74.65	GG	AG
205	5202	MANJHI	SC	M	38	MUZAFFARPUR	BIHAR	73.35	GG	GG
206	5203	MANJHI	SC	F	43	MUZAFFARPUR	BIHAR	80.3	GG	AG
207	5204	MANJHI	SC	M	36	MUZAFFARPUR	BIHAR	61.6	GG	AG
208	5205	MANJHI	SC	F	42	MUZAFFARPUR	BIHAR	65	GG	AG
209	13	MANJHI	SC	M	18	MUZAFFARPUR	BIHAR	75.5	GG	GG
210	14	MANJHI	SC	M	26	MUZAFFARPUR	BIHAR	78.5	GG	AG
211	15	MANJHI	SC	F	40	MUZAFFARPUR	BIHAR	76.5	GG	GG
212	16	MANJHI	SC	M	26	MUZAFFARPUR	BIHAR	78.5	GG	GG
213	17	MANJHI	SC	F	32	MUZAFFARPUR	BIHAR	78.95	GG	GG
214	18	MANJHI	SC	F	8	MUZAFFARPUR	BIHAR	81.5	GG	AG
215	148	MANJHI	SC	F	11	MUZAFFARPUR	BIHAR	59.7	AG	AG
216	5076	MANJHI	SC	M	52	MUZAFFARPUR	BIHAR	69.45	GG	GG
217	13	MANJHI	SC	M	18	MUZAFFARPUR	BIHAR	75.5	GG	GG
218	14	MANJHI	SC	M	26	MUZAFFARPUR	BIHAR	78.5	GG	GG
219	19	MANJHI	SC	M	18	MUZAFFARPUR	BIHAR	80	AG	AG
220	20	MANJHI	SC	F	22	MUZAFFARPUR	BIHAR	73.5	AG	GG
221	22	MANJHI	SC	F	28	MUZAFFARPUR	BIHAR	78	AG	AG
222	5112	MUSLIM	RG	M	55	PATNA	BIHAR	52.95	AG	AG
223	5136	MUSLIM	RG	M	55	PATNA	BIHAR	65.3	AG	AG
224	5138	MUSLIM	RG	F	30	PATNA	BIHAR	50.8	AA	AA
225	5143	MUSLIM	RG	M	20	PATNA	BIHAR	42.5	GG	AG
226	5167	MUSLIM	RG	M	13	PATNA	BIHAR	43.6	AA	AA
227	5174	MUSLIM	RG	M	40	MOTIHARI	BIHAR	67.3	GG	GG
228	5200	MUSLIM	RG	M	35	MUZAFFARPUR	BIHAR	59.45	AA	AA
229	5211	MUSLIM	RG	M	14	MUZAFFARPUR	BIHAR	48.55	AA	AG
230	27	MUSLIM	RG	F	26	MUZAFFARPUR	BIHAR	63	GG	AG
231	91	MUSLIM	RG	M	14	MUZAFFARPUR	BIHAR	64	AA	AA
232	93	MUSLIM	RG	M	60	MUZAFFARPUR	BIHAR	67	AG	AG
233	98	MUSLIM	RG	M	43	MUZAFFARPUR	BIHAR	54	AG	AG
234	102	MUSLIM	RG	M	13	MUZAFFARPUR	BIHAR	72	AG	AG
235	124	MUSLIM	RG	M	32	MUZAFFARPUR	BIHAR	60.2	AA	AA
236	125	MUSLIM	RG	F	28	MUZAFFARPUR	BIHAR	49.4	AA	AA
237	157	MUSLIM	RG	M	19	MUZAFFARPUR	BIHAR	54.4	AA	AA
238	162	MUSLIM	RG	F	20	MUZAFFARPUR	BIHAR	59.6	AG	AA
239	164	MUSLIM	RG	M	24	MUZAFFARPUR	BIHAR	53	AA	AA
240	5136	MUSLIM	RG	M	55	PATNA	BIHAR	65.3	AG	AG
241	165	MUSLIM	RG	M	24	MUZAFFARPUR	BIHAR	52	AA	AA
242	5285	PANDIT	OBC	F	18	MUZAFFARPUR	BIHAR	65.75	GG	GG
243	5036	PANDIT	OBC	F	68	MUZAFFARPUR	BIHAR	65.6	AA	AA
244	5036	PANDIT	OBC	F	68	MUZAFFARPUR	BIHAR	65.6	AG	GG
245	5036	PANDIT	OBC	F	68	MUZAFFARPUR	BIHAR	65.6	AA	AA
246	5284	PANDIT	OBC	M	43	MUZAFFARPUR	BIHAR	62.05	AA	AG
247	46	PANDIT	OBC	F	39	MUZAFFARPUR	BIHAR	77.5	AG	AG
248	5032	PASWAN	SC	F	53	MUZAFFARPUR	BIHAR	49.7	AA	AA
249	5079	PASWAN	SC	M	35	MUZAFFARPUR	BIHAR	49.3	AA	AA
250	5081	PASWAN	SC	F	41	MUZAFFARPUR	BIHAR	61.85	AG	AA
251	5082	PASWAN	SC	M	55	MUZAFFARPUR	BIHAR	70.35	AA	AG
252	5089	PASWAN	SC	M	42	MUZAFFARPUR	BIHAR	60.95	GG	AA
253	5090	PASWAN	SC	F	54	MUZAFFARPUR	BIHAR	59.45	AG	AG
254	5091	PASWAN	SC	M	42	MUZAFFARPUR	BIHAR	62.15	AG	AG
255	5154	PASWAN	SC	F	7	VAISALI	BIHAR	66.4	AG	AG
256	5165	PASWAN	SC	F	60	PATNA	BIHAR	51.95	AA	AA
257	5180	PASWAN	SC	F	38	MUZAFFARPUR	BIHAR	64.5	AG	AA
258	5181	PASWAN	SC	F	40	MUZAFFARPUR	BIHAR	77.4	AG	AG
259	5186	PASWAN	SC	M	8	MUZAFFARPUR	BIHAR	65.65	GG	AG
260	5193	PASWAN	SC	F	29	MUZAFFARPUR	BIHAR	49.65	AA	AA
261	5212	PASWAN	SC	M	32	MUZAFFARPUR	BIHAR	75.75	AG	AG
262	5215	PASWAN	SC	M	9	MUZAFFARPUR	BIHAR	67.7	GG	GG
263	5217	PASWAN	SC	F	46	MUZAFFARPUR	BIHAR	70	GG	GG
264	5289	PASWAN	SC	M	45	MUZAFFARPUR	BIHAR	73.7	GG	GG
265	5290	PASWAN	SC	M	18	MUZAFFARPUR	BIHAR	56.1	AG	AG
266	5291	PASWAN	SC	M	55	MUZAFFARPUR	BIHAR	50.2	AA	AA
267	5293	PASWAN	SC	M	52	MUZAFFARPUR	BIHAR	70.3	AG	AA
268	5296	PASWAN	SC	F	28	MUZAFFARPUR	BIHAR	57.1	AG	AG
269	5297	PASWAN	SC	M	30	MUZAFFARPUR	BIHAR	68.4	AG	AG
270	3	PASWAN	SC	M	58	MUZAFFARPUR	BIHAR	78	AG	AA
271	5	PASWAN	SC	F	42	MUZAFFARPUR	BIHAR	79	AG	AG
272	54	PASWAN	SC	M	40	MUZAFFARPUR	BIHAR	56	AA	AA
273	59	PASWAN	SC	F	18	MUZAFFARPUR	BIHAR	57	AA	AA

274	60	PASWAN	SC	F	26	MUZAFFARPUR	BIHAR	63	GG	AG
275	61	PASWAN	SC	F	8	MUZAFFARPUR	BIHAR	71	GG	GG
276	62	PASWAN	SC	F	60	MUZAFFARPUR	BIHAR	62	GG	AG
277	130	PASWAN	SC	F	30	MUZAFFARPUR	BIHAR	82.1	AG	AG
278	132	PASWAN	SC	M	60	MUZAFFARPUR	BIHAR	54.25	AA	AA
279	133	PASWAN	SC	F	16	MUZAFFARPUR	BIHAR	64	AG	AA
280	134	PASWAN	SC	F	16	MUZAFFARPUR	BIHAR	63.9	AG	AG
281	136	PASWAN	SC	M	18	MUZAFFARPUR	BIHAR	60.9	AA	AA
282	137	PASWAN	SC	M	11	MUZAFFARPUR	BIHAR	89.7	AG	AG
283	138	PASWAN	SC	F	11	MUZAFFARPUR	BIHAR	78.2	AA	AA
284	139	PASWAN	SC	M	19	MUZAFFARPUR	BIHAR	57.5	AG	AG
285	140	PASWAN	SC	M	14	MUZAFFARPUR	BIHAR	55	AA	AA
286	143	PASWAN	SC	F	10	MUZAFFARPUR	BIHAR	59.95	AA	AG
287	145	PASWAN	SC	M	38	MUZAFFARPUR	BIHAR	61.75	AA	AA
288	146	PASWAN	OBC	M	28	MUZAFFARPUR	BIHAR	81.25	AG	AG
289	151	PASWAN	SC	F	36	MUZAFFARPUR	BIHAR	60.8	GG	GG
290	153	PASWAN	SC	M	42	MUZAFFARPUR	BIHAR	52	AA	AA
291	5294	PASWAN	SC	M	48	MUZAFFARPUR	BIHAR	64.65	AG	AG
292	5305	PASWAN	SC	F	40	MUZAFFARPUR	BIHAR	58.7	AA	AG
293	21	PASWAN	SC	F	42	MUZAFFARPUR	BIHAR	80	AA	AG
294	55	PASWAN	SC	F	43	MUZAFFARPUR	BIHAR	77	GG	GG
295	56	PASWAN	SC	M	10	MUZAFFARPUR	BIHAR	45	AA	AG
296	62	PASWAN	SC	F	60	MUZAFFARPUR	BIHAR	62	GG	AG
297	5117	PRASAD	OBC	F	55	PATNA	BIHAR	53.35	AA	AA
298	5120	PRASAD	OBC	M	40	PATNA	BIHAR	65.65	GG	GG
299	5123	PRASAD	OBC	F	17	NALANDA	BIHAR	63.8	AA	AA
300	5124	PRASAD	OBC	F	24	PATNA	BIHAR	54.6	AG	AG
301	5147	PRASAD	OBC	M	40	PATNA	BIHAR	57.4	AA	AG
302	5159	PRASAD	OBC	M	17	PATNA	BIHAR	56.35	AG	AG
303	5161	PRASAD	OBC	M	14	PATNA	BIHAR	52.65	AG	AG
304	5172	PRASAD	OBC	M	18	VAISALI	BIHAR	55.2	AG	AG
305	37	PRASAD	OBC	M	28	MUZAFFARPUR	BIHAR	59	AG	AG
306	44	PRASAD	OBC	F	26	MUZAFFARPUR	BIHAR	48	AG	AG
307	95	PRASAD	OBC	F	38	MUZAFFARPUR	BIHAR	63	AA	AA
308	174	PRASAD	OBC	M	18	MUZAFFARPUR	BIHAR	46	AG	AA
309	37	PRASAD	OBC	M	28	MUZAFFARPUR	BIHAR	59	AG	AG
310	44	PRASAD	OBC	F	26	MUZAFFARPUR	BIHAR	48	AG	AG
311	5072	RAI	OBC	M	60	MUZAFFARPUR	BIHAR	61.6	AG	AA
312	5086	RAI	OBC	M	40	MUZAFFARPUR	BIHAR	64.85	AG	AA
313	5088	RAI	OBC	F	65	MUZAFFARPUR	BIHAR	69.3	GG	AA
314	5116	RAI	OBC	F	38	PATNA	BIHAR	61.15	AG	AA
315	5127	RAI	OBC	M	63	PATNA	BIHAR	61.8	AG	AG
316	5130	RAI	OBC	M	45	PATNA	BIHAR	50.9	AG	AG
317	5131	RAI	OBC	M	20	PATNA	BIHAR	73.15	AG	AG
318	5150	RAI	OBC	M	45	PATNA	BIHAR	69.3	AA	AA
319	5160	RAI	OBC	F	10	PATNA	BIHAR	66.15	AA	AA
320	5169	RAI	OBC	M	28	PATNA	BIHAR	45.1	AG	AG
321	5281	RAI	OBC	F	26	MUZAFFARPUR	BIHAR	50.85	AG	AG
322	5282	RAI	OBC	M	32	MUZAFFARPUR	BIHAR	55.1	AG	AG
323	64	RAI	OBC	M	40	MUZAFFARPUR	BIHAR	47	AG	AG
324	70	RAI	OBC	M	26	MUZAFFARPUR	BIHAR	65	GG	GG
325	79	RAI	OBC	M	23	MUZAFFARPUR	BIHAR	49	AA	AA
326	90	RAI	OBC	F	40	MUZAFFARPUR	BIHAR	54	AG	AA
327	121	RAI	OBC	M	50	MUZAFFARPUR	BIHAR	24	AG	AG
328	123	RAI	OBC	M	20	MUZAFFARPUR	BIHAR	54.5	AA	AA
329	152	RAI	OBC	M	50	MUZAFFARPUR	BIHAR	46.5	AG	AG
330	1	RAI	OBC	M	42	MUZAFFARPUR	BIHAR	43.45	AG	AG
331	5072	RAI	OBC	M	60	MUZAFFARPUR	BIHAR	61.6	AA	AA
332	5298	RAI	OBC	F	16	MUZAFFARPUR	BIHAR	59.15	AA	AA
333	5299	RAI	OBC	F	49	MUZAFFARPUR	BIHAR	59.45	AA	AA
334	5301	RAI	OBC	M	14	MUZAFFARPUR	BIHAR	65.65	GG	GG
335	34	RAI	OBC	M	56	MUZAFFARPUR	BIHAR	70	AA	AA
336	66	RAI	OBC	M	74	MUZAFFARPUR	BIHAR	61	AG	AG
337	152	RAI	OBC	M	50	MUZAFFARPUR	BIHAR	46.5	AG	AG
338	5019	RAM	SC	M	20	MUZAFFARPUR	BIHAR	52.2	AA	AA
339	5066	RAM	SC	M	72	MUZAFFARPUR	BIHAR	61.5	AG	AG
340	5067	RAM	SC	M	38	MUZAFFARPUR	BIHAR	55.45	AG	AA
341	5071	RAM	SC	F	32	MUZAFFARPUR	BIHAR	61.4	AG	AG
342	5262	RAM	SC	M	10	MUZAFFARPUR	BIHAR	61.65	AG	AA
343	5263	RAM	SC	F	30	MUZAFFARPUR	BIHAR	46.5	GG	AA
344	5264	RAM	SC	F	14	MUZAFFARPUR	BIHAR	56.05	AA	AA
345	5265	RAM	SC	F	20	MUZAFFARPUR	BIHAR	61.3	AG	AA
346	5267	RAM	SC	M	60	MUZAFFARPUR	BIHAR	53.2	GG	AG
347	5268	RAM	SC	F	18	MUZAFFARPUR	BIHAR	78.8	AG	AG
348	6	RAM	SC	F	18	MUZAFFARPUR	BIHAR	68	AA	AA
349	8	RAM	SC	M	50	MUZAFFARPUR	BIHAR	77	AG	AG
350	9	RAM	SC	F	18	MUZAFFARPUR	BIHAR	56	AA	AA
351	10	RAM	SC	F	20	MUZAFFARPUR	BIHAR	56	AA	AA
352	53	RAM	SC	F	60	MUZAFFARPUR	BIHAR	62	AG	AA
353	80	RAM	SC	M	12	MUZAFFARPUR	BIHAR	43	AA	AA
354	82	RAM	SC	M	13	MUZAFFARPUR	BIHAR	64	AG	AG
355	83	RAM	SC	F	13	MUZAFFARPUR	BIHAR	63	AG	AG
356	84	RAM	SC	F	18	MUZAFFARPUR	BIHAR	65	GG	GG
357	85	RAM	SC	M	46	MUZAFFARPUR	BIHAR	61.5	AA	AA
358	86	RAM	SC	F	18	MUZAFFARPUR	BIHAR	53	AA	AA
359	87	RAM	SC	F	8	MUZAFFARPUR	BIHAR	71	AA	AA
360	88	RAM	SC	F	10	MUZAFFARPUR	BIHAR	53	AA	AA
361	89	RAM	SC	F	18	MUZAFFARPUR	BIHAR	79	GG	GG
362	119	RAM	SC	M	12	MUZAFFARPUR	BIHAR	55.1	AG	AG
363	144	RAM	SC	M	28	MUZAFFARPUR	BIHAR	60.45	GG	GG
364	159	RAM	SC	M	28	MUZAFFARPUR	BIHAR	69.8	AA	AG
365	2	RAM	SC	F	40	MUZAFFARPUR	BIHAR	47.7	GG	AG

366	5	RAM	SC	M	50	MUZAFFARPUR	BIHAR	60.5	AG	GG
367	9	RAM	SC	M	21	MUZAFFARPUR	BIHAR	55.5	GG	AG
368	23	RAM	SC	M	40	MUZAFFARPUR	BIHAR	58.5	AA	AA
369	5073	RAM	SC	M	35	MUZAFFARPUR	BIHAR	53.7	AA	AA
370	176	RAM	SC	M	16	MUZAFFARPUR	BIHAR	50.25	AA	AA
371	5266	RAM	SC	M	45	MUZAFFARPUR	BIHAR	60.05	AG	AA
372	7	RAM	SC	F	19	MUZAFFARPUR	BIHAR	60	AG	AG
373	11	RAM	SC	M	40	MUZAFFARPUR	BIHAR	60.5	AG	AA
374	12	RAM	SC	F	65	MUZAFFARPUR	BIHAR	81	AG	AA
375	5038	SAH	OBC	M	23	MUZAFFARPUR	BIHAR	46.1	AA	AA
376	5039	SAH	OBC	M	48	MUZAFFARPUR	BIHAR	47.9	AG	AG
377	5083	SAH	OBC	M	28	MUZAFFARPUR	BIHAR	58.3	AG	AA
378	5085	SAH	OBC	M	66	MUZAFFARPUR	BIHAR	77.15	AG	AG
379	5087	SAH	OBC	M	73	MUZAFFARPUR	BIHAR	63.15	AA	AA
380	5094	SAH	OBC	M	45	MUZAFFARPUR	BIHAR	65.65	GG	GG
381	5098	SAH	OBC	M	52	MUZAFFARPUR	BIHAR	54.1	AA	AG
382	5128	SAH	OBC	M	33	HAZIPUR	BIHAR	46	AG	AG
383	5145	SAH	OBC	F	60	PATNA	BIHAR	68.4	GG	AA
384	5182	SAH	OBC	M	8	MUZAFFARPUR	BIHAR	65.6	AG	AG
385	5183	SAH	OBC	M	42	MUZAFFARPUR	BIHAR	70.1	AG	AG
386	5188	SAH	OBC	M	65	MUZAFFARPUR	BIHAR	79.5	GG	GG
387	5197	SAH	OBC	M	6	MUZAFFARPUR	BIHAR	61.5	AA	AG
388	28	SAH	OBC	F	22	MUZAFFARPUR	BIHAR	74	AG	AA
389	97	SAH	OBC	M	54	MUZAFFARPUR	BIHAR	63	GG	GG
390	99	SAH	OBC	M	10	MUZAFFARPUR	BIHAR	75	AG	AG
391	101	SAH	OBC	F	40	MUZAFFARPUR	BIHAR	75	GG	AG
392	126	SAH	OBC	F	34	MUZAFFARPUR	BIHAR	70.6	AG	AG
393	154	SAH	OBC	M	22	MUZAFFARPUR	BIHAR	55.8	AA	AA
394	163	SAH	OBC	M	36	MUZAFFARPUR	BIHAR	50.1	AA	AG
395	5037	SAH	OBC	F	56	MUZAFFARPUR	BIHAR	64.9	GG	AG
396	5084	SAH	OBC	M	45	MUZAFFARPUR	BIHAR	54.9	AA	AA
397	5177	SAH	OBC	F	46	MUZAFFARPUR	BIHAR	61	GG	AG
398	178-5424	SAH	OBC	M	20	MUZAFFARPUR	BIHAR	60.6	AA	AA
399	5037	SAH	OBC	F	56	MUZAFFARPUR	BIHAR	64.9	GG	GG
400	161	SAH	OBC	F	20	MUZAFFARPUR	BIHAR	48.2	AA	AA
401	5115	SAH	OBC	M	40	PATNA	BIHAR	46.4	AG	AA
402	5097	SAHNI	SC	M	28	MUZAFFARPUR	BIHAR	60.85	AG	AG
403	5100	SAHNI	SC	M	70	MUZAFFARPUR	BIHAR	77.9	GG	AA
404	5114	SAHNI	SC	F	40	VAISALI	BIHAR	66.6	AG	AG
405	5156	SAHNI	SC	M	7	MUZAFFARPUR	BIHAR	65.5	GG	GG
406	5184	SAHNI	SC	F	39	MUZAFFARPUR	BIHAR	63.65	GG	GG
407	5185	SAHNI	SC	F	34	MUZAFFARPUR	BIHAR	51.05	AA	AG
408	5189	SAHNI	SC	M	31	MUZAFFARPUR	BIHAR	52.4	AA	GG
409	5191	SAHNI	SC	F	42	MUZAFFARPUR	BIHAR	61.25	AA	AG
410	5194	SAHNI	SC	F	8	MUZAFFARPUR	BIHAR	71.95	AA	AG
411	5218	SAHNI	SC	M	8	MUZAFFARPUR	BIHAR	74.85	AA	AA
412	5278	SAHNI	SC	M	45	MUZAFFARPUR	BIHAR	47.2	GG	AA
413	5280	SAHNI	SC	F	10	MUZAFFARPUR	BIHAR	55.6	AG	AA
414	5283	SAHNI	SC	M	16	MUZAFFARPUR	BIHAR	63	AG	AG
415	5286	SAHNI	SC	F	46	MUZAFFARPUR	BIHAR	52.8	AA	AA
416	5287	SAHNI	SC	F	58	MUZAFFARPUR	BIHAR	51.95	AG	AG
417	5288	SAHNI	SC	F	29	MUZAFFARPUR	BIHAR	53	AG	AA
418	5292	SAHNI	SC	M	23	MUZAFFARPUR	BIHAR	72.6	GG	GG
419	5295	SAHNI	SC	M	36	MUZAFFARPUR	BIHAR	66.55	AG	AG
420	77	SAHNI	SC	M	18	MUZAFFARPUR	BIHAR	55	AA	AA
421	5096	SAHNI	SC	M	42	MUZAFFARPUR	BIHAR	62.2	GG	AG
422	166	SAHNI	SC	M	21	MUZAFFARPUR	BIHAR	60.2	AG	AG
423	5142	SAV	OBC	M	26	PATNA	BIHAR	53.7	GG	AA
424	5144	SAV	OBC	M	16	PATNA	BIHAR	52.6	GG	GG
425	5151	SAV	OBC	M	22	VAISALI	BIHAR	44.95	AG	AG
426	5163	SAV	OBC	M	32	NALANDA	BIHAR	48.8	AG	AA
427	127	SHARMA	GENERAL	M	52	MUZAFFARPUR	BIHAR	59	AA	AA
428	25	SHARMA	OBC	M	45	MUZAFFARPUR	BIHAR	51	AA	AA
429	5035	THAKUR	OBC	M	74	MUZAFFARPUR	BIHAR	58.85	AG	AG
430	5064	THAKUR	OBC	M	45	MUZAFFARPUR	BIHAR	66.4	AG	AG
431	5065	THAKUR	OBC	F	46	MUZAFFARPUR	BIHAR	63.3	AA	AA
432	5068	THAKUR	OBC	F	49	MOTIHARI	BIHAR	68.75	GG	GG
433	5069	THAKUR	OBC	F	41	MUZAFFARPUR	BIHAR	57.5	AG	AG
434	5092	THAKUR	OBC	F	45	MUZAFFARPUR	BIHAR	57.5	AG	AG
435	5093	THAKUR	OBC	F	45	MUZAFFARPUR	BIHAR	58.35	AA	AA
436	5129	THAKUR	OBC	F	27	PATNA	BIHAR	61.6	AA	AA
437	5149	THAKUR	OBC	F	25	PATNA	BIHAR	60.1	AG	AG
438	5170	THAKUR	OBC	M	6	VAISALI	BIHAR	51.05	AG	AA
439	5196	THAKUR	OBC	M	10	MUZAFFARPUR	BIHAR	66.45	AG	AG
440	5110	BANIYA	GENERAL	M	21	PATNA	BIHAR	51.5	GG	GG
441	5118	BANIYA	GENERAL	M	20	PATNA	BIHAR	51.4	AG	AG
442	120	BANIYA	GENERAL	F	68	MUZAFFARPUR	BIHAR	52.3	AA	AA
443	160	BANIYA	OBC	M	18	MUZAFFARPUR	BIHAR	52.6	AA	AG

Table S3. Sample description of populations included in Cohort 3 and their average allele frequencies for rs1426654 and rs2470102 SNPs.

Population	Population	Linguistic affiliation	Social Status	Geographical coordianates	State/Union territory	Sample siz	rs1426654		rs2470102	
							A allele frequency	G allele frequency	A allele frequency	G allele frequency
1	Kashmiri Pandit	Indo-European	Caste	34°22'N/75°50'E	Jammu and Kashmir	20	1	0	0.925	0.075
2	Muslim	Indo-European	Religious g	34°08'N/74°80'E	Jammu and Kashmir	37	1	0	0.973	0.027
3	Khatri	Indo-European	Caste	30°73'N/76°78'E	Punjab	99	0.9141	0.0859	0.9293	0.0707
4	Kamboj	Indo-European	Caste	31°64'N/74°86'E	Haryana	58	0.8448	0.1552	0.7586	0.2414
5	Pandit	Indo-European	Caste	31°52'N/74°74'E	Haryana	39	0.8333	0.1667	0.8462	0.1538
6	Gamit	Indo-European	Caste	21°17'N/72°83'E	Gujarat	17	0.5882	0.4118	0.6176	0.3824
7	Lohana	Indo-European	Caste	21°27'N/72°71'E	Gujarat	19	0.7632	0.2368	0.6842	0.3158
8	Brahmin	Indo-European	Caste	25°73'N/82°68'E	Uttar Pradesh	17	0.8824	0.1176	0.8824	0.1176
9	Kaleha	Indo-European	Caste	25°64'N/82°60'E	Uttar Pradesh	24	0.4375	0.5625	0.4583	0.5417
10	Srivastava	Indo-European	Caste	25°15'N/82°60'E	Uttar Pradesh	14	0.8571	0.1429	0.9286	0.0714
11	Baghel	Indo-European	Caste	23°11'N/72°40'E	Madhya Pradesh	44	0.8295	0.1705	0.8295	0.1705
12	Patkar	Dravidian	Caste	15°80'N/78°10'E	Andhra Pradesh	27	0.5926	0.4074	0.6296	0.3704
13	Telagas	Dravidian	Caste	18°17'N/83°53'E	Andhra Pradesh	28	0.6071	0.3929	0.6964	0.3036
14	Thoti	Dravidian	Caste	16°51'N/80°64'E	Andhra Pradesh	42	0.5357	0.4643	0.5476	0.4524
15	Kama	Dravidian	Caste	14°51'N/79°99'E	Andhra Pradesh	44	0.6364	0.3636	0.6477	0.3523
16	Adhi-dravidar	Dravidian	Caste	11°35'N/77°73'E	Karnataka	17	0.6176	0.3824	0.6471	0.3529
17	Havik	Dravidian	Caste	12°33'N/76°63'E	Karnataka	31	0.9677	0.0323	0.9355	0.0645
18	Yadava	Dravidian	Caste	11°54'N/79°48'E	Pondicherry	43	0.51	0.49	0.5116	0.4884
19	Minicoy	Dravidian	Caste	10°04'N/73°37'E	Lakshwadeep	39	0.6538	0.3462	0.6923	0.3076
20	Kavaratti	Dravidian	Caste	10°33'N/72°38'E	Lakshwadeep	17	0.6764	0.3236	0.7059	0.2941
21	Andrott	Dravidian	Caste	10°48'N/73°40'E	Lakshwadeep	34	0.7941	0.2058	0.8529	0.1471
22	Amini	Dravidian	Caste	11°06'N/72°43'E	Lakshwadeep	26	0.75	0.25	0.7692	0.2307
23	Agati	Dravidian	Caste	10°51'N/72°11'E	Lakshwadeep	47	0.6063	0.3936	0.7021	0.2979
24	Lingayat	Dravidian	Caste	12°08'N/78°33'E	Tamil Nadu	44	0.625	0.375	0.6705	0.3295
25	Mudaliyar	Dravidian	Caste	12°92'N/79°13'E	Tamil Nadu	26	0.4423	0.5577	0.49	0.51
26	Gujjar	Indo-European	Tribe	33°36'N/74°08'E	Jammu and Kashmir	29	1	0	0.9865	0.0135
27	Tharu	Indo-European	Tribe	29°23'N/79°30'E	Uttarakhand	57	0.45265	0.54735	0.4754	0.5246
28	Dungri Bhil	Indo-European	Tribe	26°54'N/70°54'E	Rajasthan	44	0.6705	0.3295	0.6932	0.3068
29	Meena	Indo-European	Tribe	27°24'N/73°15'E	Rajasthan	39	0.9103	0.0897	0.9231	0.0769
30	Banjara	Indo-European	Tribe	33°36'N/74°08'E	Rajasthan	40	0.75	0.25	0.7875	0.2125
31	Buxas	Indo-European	Tribe	27°36'N/80°39'E	Uttar Pradesh	30	0.45	0.55	0.4833	0.5167
32	Ao Naga	Tibeto-Burman	Tribe	25°43'N/93°15'E	Nagaland	36	0.1389	0.8611	0.1389	0.8611
33	Gond	Dravidian	Tribe	22°67'N/86°33'E	Jharkhand	37	0.4324	0.5676	0.4865	0.5135
34	Ho	AustroAsiatic	Tribe	23°35'N/85°33'E	Jharkhand	44	0.0568	0.9432	0.2727	0.7273
35	Mahali	AustroAsiatic	Tribe	22°61'N/86°30'E	Jharkhand	38	0.2632	0.7368	0.4342	0.5658
36	Parhaiya	Indo-European	Tribe	22°14'N/86°02'E	Jharkhand	11	0.3182	0.6818	0.2727	0.7273
37	Gond	Dravidian	Tribe	26°12'N/77°40'E	Madhya Pradesh	22	0.4348	0.5652	0.4783	0.5217
38	Korku	AustroAsiatic	Tribe	22°06'N/78°94'E	Madhya Pradesh	41	0.3293	0.6707	0.4756	0.5244
39	Tadavi	Indo-European	Tribe	21°19'N/72°56'E	Gujarat	38	0.6579	0.3421	0.6447	0.3553
40	Gond	Dravidian	Tribe	20°87'N/81°60'E	Chhattisgarh	35	0.2	0.8	0.4143	0.5857
41	Khariya	Austro-Asiatic	Tribe	21°90'N/83°40'E	Chhattisgarh	83	0.0542	0.9458	0.241	0.759
42	Mahadev koli	Indo-European	Tribe	16°11'N/74°12'E	Maharashtra	12	0.7917	0.2083	0.7083	0.2917
43	Warli	Indo-European	Tribe	19°17'N/72°95'E	Maharashtra	31	0.7097	0.2903	0.7581	0.2419
44	Didiya	AustroAsiatic	Tribe	22°09'N/84°40'E	Odisha	28	0.2321	0.7679	0.25	0.75
45	Juang	Austro-Asiatic	Tribe	21°25'N/84°10'E	Odisha	30	0.3167	0.6833	0.3167	0.6833
46	Mahali	Austro-Asiatic	Tribe	19°90'N/82°40'E	Odisha	47	0.15957	0.8404	0.3297	0.6703
47	Bhumiz	Austro-Asiatic	Tribe	19°40'N/85°01'E	Odisha	49	0.1224	0.8876	0.2143	0.7967
48	Ho	Austro-Asiatic	Tribe	19°20'N/84°20'E	Odisha	48	0.0416	0.9583	0.1875	0.8235
49	Bhatudi	Indo-European	Tribe	18°90'N/84°19'E	Odisha	46	0.1847	0.8263	0.1848	0.8262
50	Chenchu	Dravidian	Tribal	14°41'N/77°39'E	Andhra Pradesh	24	0.3125	0.6875	0.4583	0.5417
51	Vadera	Dravidian	Tribal	14°10'N/79°18'E	Andhra Pradesh	8	0.3125	0.6875	0.375	0.625
52	Paniya	Dravidian	Tribal	8°54'N/76°50'E	Kerala	25	0.28	0.72	0.22	0.78

Table S4. Variation of melanin index across 27 ethnic groups in the studied cohort of Middle Gangetic plain (Cohort 1).

Sl no	Population	State	Sample size	Average MI	SD	Social category
1	Brahmin	Uttar Pradesh and Bihar	77	45.13	5.91	GENERAL
2	Bhumiar	Uttar Pradesh and Bihar	54	46.45	5.1	GENERAL
3	Srivastava	Uttar Pradesh and Bihar	13	48.23	6.68	GENERAL
4	Jha (Maithili Brhamin)	Bihar	22	50.15	5.8	GENERAL
5	Kshatriya	Uttar Pradesh and Bihar	29	52.03	7.58	GENERAL
6	Sahitwar	Uttar Pradesh	7	53.66	6.78	OBC
7	Harijan	Uttar Pradesh	25	53.99	7.53	SC
8	Kurmi	Bihar	16	54.3	8.31	OBC
9	Kushwaha	Uttar Pradesh and Bihar	7	56.5	4.9	OBC
10	Prasad	Bihar	16	57.42	9.55	OBC
11	Singh	Uttar Pradesh	26	57.63	8.63	OBC
12	Das	Bihar	12	57.65	3.7	OBC
13	Yadav	Uttar Pradesh	14	58.1	9.7	RG
14	Muslim	Bihar	82	58.44	8.37	OBC
15	Choudhury	Bihar	8	58.84	6.89	OBC
16	Rai	Bihar	123	60.3	8.57	OBC
17	Sah	Bihar	60	61.19	9.8	OBC
18	Mahto	Bihar	128	62.2	10.05	OBC
19	Sharma	Bihar	7	62.87	6.68	SC
20	Sahni	Bihar	75	63.09	8.46	SC
21	Ram	Bihar	94	63.45	9.8	SC
22	Paswan	Bihar	116	63.73	9.81	OBC
23	Thakur	Bihar	34	63.69	8.67	OBC
24	Pandit (Kumhar)	Bihar	12	66.75	10.26	OBC
25	Bhagat	Bihar	24	66.75	10.26	OBC
26	Baniya	Uttar Pradesh and Bihar	14	47.86	7.17	OBC
27	Manjhi	Bihar	72	70.83	8.13	SC

OBC: Other Backward classes

RG: Religious group

SC: Scheduled caste

Table S5. List of variants found in the 3525bp region resequenced.

No	Position	Genomic location	SNP	Sequence	Variant
1	897	48134257	Novel	CATTTATGTTCA**S**CCCTTGGATT	G/C
2	927	48134287	rs1426654	TCAGGATGTTGCAGGC**R**CAACTTTCAT	A/G
3	1369	48134874	Novel	AAATAATAACTTAC**M**ATATTACAGG	C/A
4	1665	48136781	Novel	TAAAGAAATGCAGTC**M**TTGCTGCGCC	C/A
5	1790	48136906	rs759757741	TATTTTATGAA**R**ATTCTGGCTA	A/G
6	2674	48141131	Novel	AAACACTAGAAATTC**M**CGATACAGTAAT	C/A
7	2675	48141132	rs368154636	AAACACTAGAAATTCC**M**GATACAGTAAT	C/A
8	2722	48141179	Novel	AAGCATAC**M**AGACACAATTGCAAGTGTGTTG	C/A
9	2738	48141195	rs569067927	AAGCATACCAGACACAATTGCAAG**Y**GTGTTG	C/T
10	2840	484333494	rs2470102	AAAAATGTTTACTTCC**R**GCCGGGTGTGGTGG	A/G

Note: In studied SNPs, the genotype and allele frequencies of the subjects were in Hardy-Weinberg equilibrium (P>0.05)

Table S6. Summary and full model results for linear Models 1-3.

(A) Summary of regression Models 1-3

Model 1	**Df**	**Sum of Sq**	**RSS**	**AIC**	**F value**	**Pr(>F)**
<none>			27516	1881.1		
rs1426654	2	1998.0	29514	1908.2	15.14	4.493e-07 ***
factor(Population)	22	18965.2	46481	2069.4	13.0644	< 2.2e-16 ***
factor(Sex)	1	9.1	27525	1879.3	0.1381	0.7104
Model 2						
<none>			27549	1881.7		
rs2470102	2	1964.6	29514	1908.2	14.8682	5.79e-07 ***
factor(Ethnic group)	22	20237.8	47787	2081.7	13.9241	< 2.2e-16 ***
factor(Sex)	1	10.7	27560	1879.8	0.1616	0.6879
Model 3						
<none>			23490	1887		
factor(rs2470102)	2	413.3	23903	1890.8	3.3344	0.03668 *
factor(Sex)	1	0	23490	1885	0	0.99596
factor(rs1426654):factor(Ethnic group)	36	3496.4	26987	1876.5	1.567	0.02266*

Note: Interaction between rs1426654 genotype and ethnic group was found significant (p=0.01) whereas interaction between rs2470102 genotype and ethnic group was found insignificant (p=0.18). Hence, in Model 3, interaction between rs1426654 genotype and population was also included as a part pf adjustment for rs1426654. Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(B) Full description of linear Models 1-3

Model 1:

Coefficients:	**Estimate**	**Std. Error**	**t value**	**Pr(>|t|)**
(Intercept)	49.7026	4.1323	12.028	< 2e-16 ***
rs1426654AG	3.6506	0.9258	3.943	9.42e-05 ***
rs1426654GG	6.2885	1.2038	5.224	2.78e-07 ***
factor(Ethnic.group)BHAGAT	17.8510	4.6448	3.843	0.00014 ***
factor(Ethnic.group)BHUMIHAAR	-4.0015	4.3039	-0.93	0.35305
factor(Ethnic.group)BRAHMIN	-5.3841	4.1989	-1.282	0.20046
factor(Ethnic.group)DAS	4.2913	5.2568	0.816	0.41477
factor(Ethnic.group)HARIJAN	8.1481	5.4696	1.490	0.13706
factor(Ethnic.group)JHA	-1.2758	4.8878	-0.261	0.79422
factor(Ethnic.group)KSHATRIYA	4.4093	4.9921	0.883	0.3776
factor(Ethnic.group)KURMI	1.8519	4.9922	0.371	0.71085
factor(Ethnic.group)MAHTO	5.2893	4.2525	1.244	0.21427
factor(Ethnic.group)MANDAL	-4.4233	5.2811	-0.838	0.40275
factor(Ethnic.group)MANJHI	18.0403	4.4006	4.100	4.98e-05 ***
factor(Ethnic.group)MUSLIM	5.5471	4.4508	1.246	0.21335
factor(Ethnic.group)PANDIT	15.1019	5.2680	2.867	0.00436 **
factor(Ethnic.group)PASWAN	11.9017	4.2326	2.812	0.00516 **
factor(Ethnic.group)PRASAD	3.5394	4.6201	0.766	0.44406
factor(Ethnic.group)RAI	4.5605	4.3612	1.046	0.2963
factor(Ethnic.group)RAM	8.0321	4.2833	1.875	0.06146 .
factor(Ethnic.group)SAH	9.0770	4.3547	2.084	0.03773 *
factor(Ethnic.group)SAHNI	8.5337	4.4369	1.923	0.05512 .
factor(Ethnic.group)SAV	-4.3432	5.7649	-0.753	0.45165
factor(Ethnic.group)SHARMA	5.6139	7.0537	0.796	0.42656
factor(Ethnic.group)THAKUR	8.4132	4.7664	1.765	0.07828 .
factor(Sex)M	-0.3165	0.8515	-0.372	0.71035

Residual standard error: 8.123 on 417 degrees of freedom
Multiple R-squared: 0.5115, Adjusted R-squared: 0.4822
F-statistic: 17.47 on 25 and 417 DF, p-value: < 2.2e-16

Model 2

Coefficients:	**Estimate**	**Std. Error**	**t value**	**Pr(>|t|)**
(Intercept)	49.1487	4.1575	11.822	< 2e-16 ***
rs2470102AG	2.5649	0.8829	2.905	0.00387 **
rs2470102GG	7.1025	1.3202	5.380	1.24e-07 ***
factor(Ethnic.group)BHAGAT	18.9201	4.6514	4.068	5.68e-05 ***
factor(Ethnic.group)BHUMIHAAR	-3.4594	4.3108	-0.802	0.42273
factor(Ethnic.group)BRAHMIN	-4.3574	4.2191	-1.033	0.30231
factor(Ethnic.group)DAS	6.0138	5.2572	1.144	0.25332
factor(Ethnic.group)HARIJAN	9.5667	5.4595	1.752	0.08046 .
factor(Ethnic.group)JHA	1.3288	4.9180	0.270	0.78715
factor(Ethnic.group)KSHATRIYA	6.7588	4.9924	1.354	0.17653
factor(Ethnic.group)KURMI	3.7816	4.9844	0.759	0.44846
factor(Ethnic.group)MAHTO	6.2776	4.2450	1.479	0.13994
factor(Ethnic.group)MANDAL	-2.5207	5.2814	-0.477	0.63341
factor(Ethnic.group)MANJHI	19.8983	4.3727	4.551	7.03e-06 ***
factor(Ethnic.group)MUSLIM	6.8334	4.4613	1.532	0.12636
factor(Ethnic.group)PANDIT	14.7026	5.2719	2.789	0.00553 **
factor(Ethnic.group)PASWAN	13.2441	4.2354	3.127	0.00189 **
factor(Ethnic.group)PRASAD	4.7479	4.6158	1.029	0.30425
factor(Ethnic.group)RAI	6.3296	4.3621	1.451	0.14752
factor(Ethnic.group)RAM	9.7680	4.2914	2.276	0.02334 *
factor(Ethnic.group)SAH	10.5773	4.3571	2.428	0.01562 *
factor(Ethnic.group)SAHNI	9.7156	4.4375	2.189	0.02912 *
factor(Ethnic.group)SAV	-1.2107	5.7561	-0.21	0.83351

factor(Ethnic.group)SHARMA	6.1937	7.0732	0.876	0.38172
factor(Ethnic.group)THAKUR	9.8266	4.7606	2.064	0.03962 *
factor(Sex)M	-0.3423	0.8515	-0.402	0.68786

Residual standard error: 8.128 on 417 degrees of freedom
Multiple R-squared: 0.5109, Adjusted R-squared: 0.4816
F-statistic: 17.42 on 25 and 417 DF, p-value: < 2.2e-16

Model 3:

	Estimate	**Std. Error**	**t value**	**Pr(>|t|)**	
Coefficients:	51.931587	5.612299	9.253	< 2e-16***	
(Intercept)	1.032431	1.152981	0.895	0.37112	
factor(rs2470102)AG	4.522402	1.770718	2.554	0.01104 *	
factor(rs2470102)GG	-1.568413	9.668347	-0.162	0.87122	
factor(rs1426654)AG	-4.958384	9.775117	-0.507	0.61228	
factor(rs1426654)GG	10.315483	6.455744	1.598	0.1109	
factor(Ethnic.group)BHAGAT	-5.194294	5.844608	-0.889	0.37471	
factor(Ethnic.group)BHUMIHAAR	-7.217139	5.721015	-1.262	0.2079	
factor(Ethnic.group)BRAHMIN	2.243413	7.904898	0.284	0.77672	
factor(Ethnic.group)DAS	12.500000	9.642020	1.296	0.19562	
factor(Ethnic.group)HARIJAN	-2.670186	6.845262	-0.390	0.6967	
factor(Ethnic.group)JHA	2.391216	7.893755	0.303	0.76211	
factor(Ethnic.group)KSHATRIYA	1.368413	9.668347	0.142	0.88752	
factor(Ethnic.group)KURMI	-0.463784	6.125338	-0.076	0.93969	
factor(Ethnic.group)MAHTO	-4.681587	9.668347	-0.484	0.62851	
factor(Ethnic.group)MANDAL	24.951587	8.121757	3.072	0.00228	**
factor(Ethnic.group)MANJHI	1.501654	6.121572	0.245	0.80635	
factor(Ethnic.group)MUSLIM	12.139471	7.190666	1.688	0.09219	.
factor(Ethnic.group)PANDIT	5.551407	5.873786	0.945	0.3452	
factor(Ethnic.group)PASWAN	7.196707	6.827252	1.054	0.2925	
factor(Ethnic.group)PRASAD	9.209416	6.251721	1.473	0.14155	
factor(Ethnic.group)RAI	5.278185	5.971663	0.884	0.37733	
factor(Ethnic.group)RAM	2.659252	6.166842	0.431	0.66656	
factor(Ethnic.group)SAH	6.878002	6.316645	1.089	0.2769	
factor(Ethnic.group)SAHNI	3.911201	9.682583	0.404	0.68648	
factor(Ethnic.group)SAV	3.064018	7.906426	0.388	0.69858	
factor(Ethnic.group)SHARMA	9.151747	7.222020	1.267	0.20586	
factor(Ethnic.group)THAKUR	0.004395	0.867466	0.005	0.99596	
factor(Sex)M	17.298116	10.920906	1.584	0.11404	
factor(rs1426654)AG:factor(Ethnic.group)BHAGAT	12.331174	11.166904	1.104	0.27018	
factor(rs1426654)GG:factor(Ethnic.group)BHAGAT	-0.305235	10.071669	-0.030	0.97584	
factor(rs1426654)AG:factor(Ethnic.group)BHUMIHAAR	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)BHUMIHAAR	2.136143	9.990852	0.214	0.83081	
factor(rs1426654)AG:factor(Ethnic.group)BRAHMIN	6.497607	10.387505	0.626	0.53201	
factor(rs1426654)GG:factor(Ethnic.group)BRAHMIN	3.852195	11.820237	0.326	0.74468	
factor(rs1426654)AG:factor(Ethnic.group)DAS	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)DAS	-2.489190	13.257261	-0.188	0.85116	
factor(rs1426654)AG:factor(Ethnic.group)HARIJAN	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)HARIJAN	4.345608	11.137376	0.390	0.69662	
factor(rs1426654)AG:factor(Ethnic.group)JHA	4.592588	13.153622	0.349	0.72717	
factor(rs1426654)GG:factor(Ethnic.group)JHA	4.100732	11.589168	0.354	0.72365	
factor(rs1426654)AG:factor(Ethnic.group)KSHATRIYA	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)KSHATRIYA	3.580710	12.941097	0.277	0.78217	
factor(rs1426654)AG:factor(Ethnic.group)KURMI	2.876572	13.685063	0.210	0.83363	
factor(rs1426654)GG:factor(Ethnic.group)KURMI	7.821894	10.098584	0.775	0.43909	
factor(rs1426654)AG:factor(Ethnic.group)MAHTO	12.713997	10.335012	1.230	0.21939	
factor(rs1426654)GG:factor(Ethnic.group)MAHTO	1.459883	13.070109	0.112	0.91112	
factor(rs1426654)AG:factor(Ethnic.group)MANDAL	8.975952	14.840047	0.605	0.54564	
factor(rs1426654)GG:factor(Ethnic.group)MANDAL	-7.590028	11.667020	-0.651	0.51573	
factor(rs1426654)AG:factor(Ethnic.group)MANJHI	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)MANJHI	9.553607	10.404883	0.918	0.35911	
factor(rs1426654)AG:factor(Ethnic.group)MUSLIM	6.926458	11.026486	0.628	0.53027	
factor(rs1426654)GG:factor(Ethnic.group)MUSLIM	6.269939	12.075353	0.519	0.6039	
factor(rs1426654)AG:factor(Ethnic.group)PANDIT	2.114924	13.273035	0.159	0.87349	
factor(rs1426654)GG:factor(Ethnic.group)PANDIT	12.283898	9.987157	1.230	0.21947	
factor(rs1426654)AG:factor(Ethnic.group)PASWAN	11.340688	10.146104	1.118	0.26439	
factor(rs1426654)GG:factor(Ethnic.group)PASWAN	-5.280527	10.741568	-0.492	0.62329	
factor(rs1426654)AG:factor(Ethnic.group)PRASAD	6.953293	13.060223	0.532	0.59476	
factor(rs1426654)GG:factor(Ethnic.group)PRASAD	-7.416109	10.234743	-0.725	0.46914	
factor(rs1426654)AG:factor(Ethnic.group)RAI	7.449516	11.039341	0.675	0.5002	
factor(rs1426654)GG:factor(Ethnic.group)RAI	7.510428	10.071125	0.746	0.45629	
factor(rs1426654)AG:factor(Ethnic.group)RAM	3.558943	10.367779	0.343	0.73159	
factor(rs1426654)GG:factor(Ethnic.group)RAM	9.356357	10.311829	0.907	0.3648	
factor(rs1426654)AG:factor(Ethnic.group)SAH	15.511284	10.437537	1.486	0.13808	
factor(rs1426654)GG:factor(Ethnic.group)SAH	1.701054	10.480881	0.162	0.87116	
factor(rs1426654)AG:factor(Ethnic.group)SAHNI	8.553527	10.640407	0.804	0.42197	
factor(rs1426654)GG:factor(Ethnic.group)SAHNI	-7.919985	13.658755	-0.580	0.56236	
factor(rs1426654)AG:factor(Ethnic.group)SAV	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)SAV	NA	NA	NA	NA	
factor(rs1426654)AG:factor(Ethnic.group)SHARMA	NA	NA	NA	NA	
factor(rs1426654)GG:factor(Ethnic.group)SHARMA	-0.709516	11.074951	-0.064	0.94895	
factor(rs1426654)AG:factor(Ethnic.group)THAKUR	8.102648	13.271767	0.611	0.54188	
factor(rs1426654)GG:factor(Ethnic.group)THAKUR					

Residual standard error: 7.873 on 379 degrees of freedom
Multiple R-squared: 0.583, Adjusted R-squared: 0.5137
F-statistic: 8.41 on 63 and 379 DF, p-value: < 2.2e-16

Note: Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table S7. Effect of rs2470102 genotypes on skin pigmentation variation among individuals of Cohort 2.

Difference in estimated mean melanin index (in melanin units) for rs2470102 genotypes under models 2 and 3.

Model no	Model description	rs2470102 Genotype	Difference in estimated means of the genotypes (assuming that the other variables in the model are fixed)	Lower CI (95% family-wise confidence level)	Upper CI	p value (corrected for multiple comparisons)
Model 2	Adjusted for population and sex (MI ~ rs2470102+population+sex)	AG vs AA	2.56	0.51	4.62	0.0097*
		GG vs AG	4.54	1.57	7.5	<0.0001*
		GG vs AA	7.10	4.02	10.18	0.0011*
Model 3	Adjusted for rs1426654, population and sex (MI ~ rs2470102+sex+rs1426654*population)	AG vs AA	1.03	-1.65	3.72	0.637
		GG vs AG	3.49	-0.19	7.17	0.067
		GG vs AA	4.52	0.39	8.65	0.028*

* indicates values to be significant

CI: confidence intervals

Table S8. Summary of the putative microRNA (miR) targets inferred by different web-based miRNA prediction tools for rs2470102 SNP.

	Seed length	Allele	MICROsnipper	mirSNP	PolymirtS	Mrsnp	RegRNA	ΔG1	ΔG2	ΔΔG=ΔG1-ΔG2	Conservation score	SNP effect
								Allele 1 (G/T)	Allele 2 (A/C)			
hsa-miR-6512-3p	8	T	√		√						0	Disrupts
hsa-miR-3180-5p	7	T	√									Disrupts
hsa-miR-4691-3p	6	T	√									Disrupts
hsa-miR-4267	6	T	√									Disrupts
hsa-miR-6720-5p		T			√						0	Disrupts
hsa-miR-6849-3p		T			√						0	Disrupts
hsa-miR-4664-3p	7	C	√									Creates
hsa-miR-4743-5p	6	C	√									Creates
hsa-miR-6850-3p	NA	C			√						0	Creates
hsa-miR-3652	NA	A>G				√	√	-43.2	-25	-18.2	0.136	Enhance
hsa-miR-4430	NA	A>G				√		-43.2	-26.2	-17	0.136	Enhance
hsa-miR-4743	NA	A>G				√		0	-56.5	56.5	0.136	Enhance
hsa-miR-941	15-16	A>G					√	-25.6	-26.2	0.6		Enhance
hsa-miR-1180	NA	C>T		√	√	√		-28.7	-51.1	22.4	0.09	Create/Enhance

Note: Highlighted SNPs in yellow show the high confidential miRNA targets obtained after sequential filtering (as described in Supplementary Text)

Table S9. Allele frequency for rs1426654 and rs2470102 SNPs in 1825 individuals of 52 diverse populations (Cohort 3) of India grouped by social status and linguistic affiliation. It also contains allele frequency for other world populations for rs2470102 for which data is available from 1000 genomes and the respective allele frequencies for rs1426654.

Population	rs1426654 (A/G)		rs2470102 (A/G)	
	A allele frequency	G allele frequ	A allele freq	G allele frequency
INDIA				
Cohort 3 (Grouped by Social status)				
Caste	0.72	0.28	0.76	0.24
Tribe	0.39	0.61	0.45	0.55
Cohort 3 (Grouped by Linguistic affiliation)				
Indo-European	0.72	0.28	0.72	0.28
Dravidian	0.54	0.45	0.6	0.4
AustroAsiatic	0.18	0.82	0.3	0.7
Tibeto-Burman	0.14	0.86	0.14	0.86
CSHL-HAPMAP:HAPMAP-GIH (Gujarati Indians in USA)	0.96	0.05	0.96	0.04
Other world populations*				
Finnish in Finland (FIN)	0.99	0.01	1	0.01
Utah Residents (CEPH) with Northern and Western European ancestry (CEU)	1	0	0.98	0.02
Iberian population in Spain (IBS)	1	0	1	0
Puerto Ricans from Puerto Rica (PUR)	0.8	0.2	0.85	0.16
Luhya in Webuye, Kenya (LWK)	0.06	0.94	0.07	0.93
British in England and Scotland (GBR)	1	0	1	0
African	0.08	0.92	0.08	0.92
Americans of African Ancestry in SW, USA (ASW)	0.19	0.81	0.19	0.81
Tuscani in Italy (TSI)	1	0.01	1	0.01
Yoruba in Ibadan, Nigeria (YRI)	0.02	0.98	0.02	0.98
Colombian from Medelin, Colombia (CLM)	0.73	0.28	0.75	0.25

* These frequencies are for those populations for which we have the data available (Ensembl) for rs2470102 and has been derived from 1000 genomes (Phase1)

Table S10. List of primer sequences used in the study.

Primer sequences	Tm (ºC)
EXON 1_FW: 5'- ttgtcagctctcctccgtct-3'	50
EXON 1_RV: 5'-aaatgctaaaattcagaagcgtaa-3'	
EXON 2_FW: 5'-tctcttttcagtcccccaaa-3'	54
EXON 2_RV: 5'-agaagctggtgctctgcaac-3'	
EXON 3_4_FW: 5'-gcaaaacattggactcttttaatc-3'	50
EXON 3_4_RV: 5'-ttgaatacatgttgtttttctactga-3'	
EXON 5_FW: 5'-tttttctctaagcaatatgcaaaa-3'	53
EXON 5_RV: 5'-ggttaactcacagacctgttgga-3'	
EXON 6_FW: 5'- gatactgcccaaaagctatc-3'	50
EXON 6_RV: 5'-aaaggtagggacttggtctt-3'	
EXON 7_FW: 5'-aggccccaaataaagaaatgcgga-3'	57
EXON 7_RV: 5'-agatctcttgaattgtaccccaggct-3'	
EXON 8_FW: 5'-tgtgctacctgggttacccgaa-3'	58
EXON 8_RV: 5'-acctcgtgatccacccgcct-3'	
EXON 9_FW: 5'-gctctaacaacaatttttcaaaacg-3'	50
EXON 9_RV: 5'-tttaaaactcccaccagctttt-3'	

Tm: Melting temperature